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HOW MENTAL HEALTH, SOJOURNER ADJUSTMENT, AND DRINKING MOTIVES IMPACT ALCOHOL-RELATED CONSEQUENCES FOR COLLEGE STUDENTS STUDYING ABROAD

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Abstract

The topic of college student drinking has been widely addressed in the literature. Traditional-aged college students are considered to be an at-risk population in terms of the problematic use of alcohol, putting them at risk for a wide range of negative consequences. College students who study abroad are a sub-group of students who may be vulnerable to increased alcohol-related consequences due to variables associated with being in an unfamiliar environment where alcohol is often more accessible. While previous studies have explored the impact that a range of factors has on alcohol-related consequences for students abroad, none has examined the impact that mental health has on consequences. The present study sought to address this gap in the literature by sampling college students (N = 157) who were participating in a study abroad program during Spring 2015. Specifically, it investigated how mental health, sojourner adjustment, and drinking motives impacted alcohol-related consequences for college students studying abroad. It also explored how mental health changed for students while abroad and how pre-abroad mental health impacted sojourner adjustment for the students. To operationalize the construct of mental health, the Distress Index of the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke et al., 2012) was used. To operationalize sojourner adjustment, the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b) was used. To operationalize drinking motives, the Drinking Motives Questionnaire-Revised (Cooper, 1994) was used, and to operationalize alcohol-related consequences, the Rutgers Alcohol Problem Index modified (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012) was used.

Ten research hypotheses guided the study. It was hypothesized that poorer mental health as measured by an elevated Distress Index score (score that falls in the 70th percentile or above)

on the CCAPS-34 would be associated with increased alcohol-related consequences; higher scores on the Social Interaction with Co-nationals subscale of the Sojourner Adjustment Measure would be associated with increased alcohol-related consequences; higher scores on the Homesickness/Feeling Out of Place subscale of the Sojourner Adjustment Measure would be associated with increased alcohol-related consequences; higher scores on the Coping Motives subscale of the Drinking Motives Questionnaire-Revised would be associated with increased alcohol-related consequences; higher scores on the Social Motives subscale of the Drinking Motives Questionnaire-Revised would be associated with increased alcohol-related consequences; higher scores on the Conformity Motives subscale of the Drinking Motives Questionnaire-Revised would be associated with increased alcohol-related consequences; higher scores on the Enhancement Motives subscale of the Drinking Motives Questionnaire-Revised would be associated with increased alcohol-related consequences; student mental health would decrease while students are abroad as evidenced by increases in Distress Index scores on the CCAPS-34; an elevated score (score that falls in the 70th percentile or above) on the Distress Index of the CCAPS-34 at pre-departure would predict lower sojourner adjustment as demonstrated by higher scores on negative sojourner adjustment scales and lower scores on the positive sojourner adjustment scales; pre-departure CCAPS-34 Distress Index scores that fell in the low range (score that falls below the 34th percentile) would predict sojourner adjustment as demonstrated by higher scores on the positive sojourner adjustment scales and lower scores on the negative sojourner adjustment scales.

The hypotheses were partially supported. While elevated scores on the distress index were not specifically associated with increased alcohol-related consequences as hypothesized, findings showed that students who were academically distressed or those who had concerns

related to eating or alcohol use were more at risk for alcohol-related consequences. With regards to sojourner adjustment, neither of the negative Sojourner Adjustment Measure scales predicted increased alcohol-related consequences as hypothesized. In terms of the positive Sojourner Adjustment Measure scales, those who reported they had a strong sense of identification with the host culture had statistically significant decreased rates of alcohol-related consequences. Unexpectedly, participants who indicated that they had a high degree of interaction with host nationals had more alcohol-related consequences. Next, students who indicated they drank for social reasons were more likely to experience alcohol-related consequences, whereas students who drank for other reasons were not. While it was hypothesized that mental health would decrease for students while abroad, the results did not support this hypothesis. Results from post-hoc analyses showed that only scores related to eating concerns increased in a statistically significant way for students while abroad. There was an unanticipated statistically significant decrease in social anxiety for participants from pre-abroad to abroad. Finally, results showed that pre-departure distress predicted increased feelings of homesickness once abroad, decreased interaction with both co-nationals and host-nationals, and a decreased sense of identifying with the host culture.

The results of this study offer important insight into the experiences of students abroad, particularly with regards to student mental health. Moreover, these results can be used to guide future research and shape study abroad program practices and policies.

Keywords: college student drinking, mental health, study abroad, alcohol-related consequences, sojourner adjustment

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Chapter I: Introduction

Statement of the Problem

It is estimated that approximately 1,800 college students in the U.S. die annually as a result of alcohol-related unintentional injuries (Hingson, Zha, & Weitzman, 2009). Another 599,000 students suffer injuries while under the influence of alcohol, and more than 600,000 students are assaulted by another student who has been drinking (Hingson, Zha, & Weitzman, 2009). Studies with college students have demonstrated that heavy drinking greatly increases the risk of these and many other alcohol-related consequences for this population (O'Brien, McCoy, Rhodes, Wagoner, & Wolfson, 2008).

College students ages 18-24 are considered at-risk in terms of the problematic use of alcohol (Dodd, Glassman, Arthur, Webb, & Miller, 2010; Ham & Hope, 2003; Hingson, Zha, & Weitzman, 2009; Wechsler, Dowdall, Davenport, & Castillo, 1995). Much attention has been dedicated to the subject of college student drinking and related consequences in the literature. The issue has been framed as both a mental health and public health issue (Dodd et al., 2010; Wechsler & Nelson, 2001). It is estimated that almost half of college students engaged in binge drinking in the past two weeks (Borden, et al., 2011; Broadwater, Curtin, Martz, & Zrull, 2006), putting them at risk for a wide range of potential negative consequences, such as compromising their health, relationships, academic and judicial status, and physical and emotional safety. *Binge drinking*, also referred to as *heavy episodic drinking*, is the consumption of five or more standard drinks in a row for men, and four or more standard drinks in a row for women (Wechsler & Nelson, 2001).

One sub-group of college students that may be at risk for increased alcohol-related consequences are students who are studying abroad (Pedersen, LaBrie, & Hummer, 2009; Pedersen, Neighbors, Lee, & Larimer, 2012; Pedersen, Skidmore, & Aresi, 2014). The majority of 4-year colleges and universities in the United States offer study abroad opportunities for their students, ranging from one month to a year, and nearly 274,000 American students participated in travel abroad programs during the 2011-2012 academic year (Pedersen, Skidmore, & Aresi, 2014). U.S. student participation in study abroad has grown 150% over the past decade (Wielkiewicz & Turkowski, 2010) and is likely to increase threefold by 2016-2017 (Hummer, Pedersen, Mirza, & LaBrie et al., 2010; Pedersen, et al., 2009; Pedersen, et al., 2010b).

Despite the increasing numbers of American students who are participating in study abroad programs, surprisingly little research has been conducted with this population of students (Pedersen et al., 2012). Researchers have suggested that students abroad may be particularly vulnerable to alcohol-related consequences due to factors such as lack of familiarity with the surroundings, culture, and language in their host countries. Additionally, students abroad may face alcohol-related consequences that are unique to the study abroad context. The limited number of studies that have been conducted have investigated a range of factors that may contribute to increases in drinking and alcohol-related consequences for students abroad. Few studies, however, have examined the topic of mental health among American study abroad students (Hunley, 2010). This is not only surprising, but also worrisome, in light of the lack of mental health resources in most study abroad settings. In addition to knowing more about the mental health status of study abroad students in general, it is imperative that programs know if students with compromised mental health status are more vulnerable to alcohol-related consequences. This study, therefore, addressed this significant gap in the literature by examining

mental health for students studying abroad and the impact that mental health has on alcohol-related consequences for this group.

The onset of most lifetime mental health disorders is just before or during the traditional college years, where students fall between the ages of 18-24 (Eisenberg, Gollust, Golberstein, & Heffner, 2007). It is estimated that as many as 30% of college students have a mental health issue (Hartley, 2013; Zivin, Eisenberg, Gollust, Golberstein, 2009), and mental health disorders in early adulthood have been found to be associated with high risk drinking behaviors (Hefner & Eisenberg, 2009; Kenney, Lac, LaBrie, Hummer, & Pham, 2013). Within the college student population, poor mental health and psychological distress have been associated with alcohol-related problems (LaBrie, Kenney, & Lac, 2010; Kenney et al., 2013). However, to date the relationship between psychological distress and alcohol-related consequences has not been examined for American college students abroad.

Unfortunately, students planning to go abroad sometimes choose not to report their mental health conditions on required medical forms due to fears that doing so will prevent them from being able to participate in the study abroad program (McCabe, 2005). McCabe (2005) identified a range of stressors faced by students abroad that may exacerbate pre-existing or dormant mental health issues. Feelings of loss and separation can become pronounced when students find themselves geographically further from loved ones back home. Students abroad may also feel social pressure as they attempt to integrate with a new group of friends in an unfamiliar place. The challenges of navigating travel and transportation in unknown territory can be stress provoking even for more experienced travelers. Finally, adjusting to a new culture, language, food, and living arrangements can be difficult.

Much of the existing literature on the process of coping with a new and unfamiliar culture has focused on the experiences of individuals who establish permanent or long-term residency in a foreign environment (Church, 1982; Pedersen, Neighbors, Larimer, & Lee, 2011b; Taft, 1977). An increasing number of individuals, however, are establishing temporary residency in foreign countries (Pedersen et al., 2011b). College students who study abroad often fit this category. The process of psychological and sociocultural adjustment of short-term residents in a foreign environment is known as *sojourner adjustment* (Church, 1982). Pedersen et al. (2011b) identified six factors, four positive and two negative, that can be used to gauge one's level of sojourner adjustment. The positive factors include: social interaction with host nationals, cultural understanding and participation, language development and use, and host culture identification. Conversely, social interaction with co-nationals and homesickness/feeling out of place negatively relate to sojourner adjustment. Studies have demonstrated that students who have a higher ratio of host nationals in their friendship networks report increased levels of contentment and lower levels of homesickness than those who spend time mainly with co-nationals while abroad (Hendrickson, Rosen, & Aune, 2011).

Alternatively, homesickness/feeling out of place is associated with affective difficulties such as feelings of anxiety or depression that one may experience while attempting to adapt to the host culture (Pedersen et al., 2011). While loneliness is a common experience for students who study abroad, it can lead to the onset of symptoms of anxiety and depression (Hunley, 2010). In a study conducted at the University of Bergen, Norway with a sample of 308 international students that included 36 American students, Sam and Eide (1991) found that approximately 25% of students' experienced declines in mental health while abroad as evidenced by increases in depression, anxiety, and somatic symptoms.

In two studies with a combined total of 104 American students studying in Rome, Hunley (2010) explored the relationship between psychological distress and loneliness on diminished functioning while abroad. Findings from the two studies indicated that psychological distress and loneliness were significantly related to lower levels of functioning for the students while abroad. Students who are psychologically distressed have consistently been found to be more socially isolated (Hefner & Eisenberg, 2009).

Students with poor mental health tend to endorse stronger motivations for drinking than their peers with stronger mental health (Kenney et al., 2013). Students with mental health issues may use alcohol as a coping strategy, and this behavior is associated with greater severity of alcohol use disorders (Khaylis, Trockel, & Taylor, 2009). Additionally, students abroad may drink to cope with feelings of depression, anxiety, loneliness, and the challenges of adapting to the new environment (Pedersen et al., 2012). Further, those who are socially uncomfortable abroad may drink in an attempt to fit in and gain social acceptance from peers (Pedersen et al., 2012).

Motivational models of alcohol use presume that drinking behaviors are motivated by different needs, both personal and environmental (Cooper, 1994; Cox & Klinger, 1988; LaBrie, Ehret, Hummer, and Prenovost, 2012b). Cooper (1994) created a measure of drinking motives to assess social motives, coping motives, enhancement motives, and conformity motives for drinking based on a conceptual model introduced by Cox and Klinger (1988). Compared to individuals who drink for social or enhancement reasons, individuals who drink to cope are at increased risk for alcohol-related consequences (Cooper, 1994). LaBrie et al. (2012b) found a direct relationship between coping drinking motives and negative consequences for college women in their study. Additionally, they found that coping motives and alcohol-related

consequences were mediated by negative college adjustment (LaBrie et al., 2012b). Because McCabe (2005) compared the experience of going abroad to that of the first year college experience, it is reasonable to speculate that the findings of LaBrie et al. (2012b) might apply to college students abroad.

Researchers have investigated the association between sojourner adjustment and alcohol-related consequences, and the extent to which these relationships are moderated by drinking motives for American college students abroad (Pedersen et al., 2012). Homesickness, a negative factor of sojourner adjustment, has been found to predict increased rates of alcohol-related consequences for students abroad (Pedersen et al., 2012). Existing research has not, however, comprehensively explored the effect that student mental health has on alcohol-related consequences for college students abroad. Given that almost one third of the traditional college student population have a mental health issue; an increasing number of students are studying abroad; study abroad exposes students to stressors unique to the context that may exacerbate mental health issues, and students with mental health issues may be at risk for alcohol-related consequences; and students abroad are considered at risk for increased drinking and alcohol-related consequences, research on this topic is warranted.

Purpose of the Current Study

This study aimed to extend the current knowledge base on factors that influence alcohol-related consequences for American college students who are studying abroad by adding mental health as a predictor variable. Currently, little is known about the mental health status of American students abroad. Previous studies have found that students with mental heath issues may be at risk for increased alcohol-related consequences, but this topic had not been explored

within the study abroad context.

This quantitative study extended the research conducted by Pedersen et al. (2012) by including a measure of psychological distress to assess the mental health of college students abroad. Specifically, it examined the ways that different aspects of psychological distress, including depression, generalized anxiety, social anxiety, academic distress, eating concerns, and hostility, are uniquely related to harmful consequences of drinking abroad. As in the research conducted by Pedersen et al. (2012), this study focused on alcohol-related consequences rather than general alcohol use, because increased alcohol use alone may not be problematic. It is when drinking rises above moderate levels that alcohol-related consequences tend to emerge (Pedersen et al., 2012). This study also investigated the degree to which the different factors of sojourner adjustment are related to negative alcohol-related consequences. In order to amend a limitation of the study completed by Pedersen et al. (2012), the current study included a data collection period while students were abroad, rather than after they had returned from their time abroad. This study also examined changes in students' pre-departure to abroad mental health, and the relationship that pre-study abroad mental health has on sojourner adjustment.

Significance of the Current Study

Past research has linked poor mental health and alcohol-related consequences for college students, yet this topic had not previously been explored with college students in the study abroad context. This study addressed this significant gap in the literature by providing a more comprehensive understanding of both the status of mental health for students abroad, and the influence that mental health has on alcohol-related consequences for students abroad. This knowledge has the potential to shape future research and to guide university study abroad

program policies and practices. Greater knowledge of the state of study abroad student mental health may inform mental health screening practices for those planning to go abroad. In turn this could help in better identifying the mental health needs of students before they go abroad. Additionally, this information can help abroad professionals to be more adequately prepared to meet specific mental health issues once students arrive.

Often, there is a lack of mental health services available to assist students overseas (McCabe, 2005). Clearer evidence of the scope of study abroad student mental health issues could also provide support for the argument that study abroad programs should hire mental health professionals to more effectively support the mental health needs of students abroad. Finally, increased understanding of the relationship between student mental health and alcohol-related consequences can help study abroad professionals in educating students about harm reduction strategies to decrease the potential for negative consequences that occur as a result of drinking while abroad.

Research Questions

The goal of this study was to explore the influence that mental health, sojourner adjustment, and drinking motives had on the alcohol-related consequences for a sample of undergraduate college students studying abroad. Five research questions guided this study:

1. How does mental health impact alcohol-related consequences for college students studying abroad?
2. How does sojourner adjustment impact alcohol-related consequences for college students studying abroad?

3. How do drinking motives impact alcohol-related consequences for college students studying abroad?
4. How does mental health change for college students while they are abroad?
5. Does pre-study abroad mental health predict sojourner adjustment?

Definition of Terms

Mental Health can be defined as a syndrome of symptoms of positive feelings and positive functioning in life (Keyes, 2002). It includes emotional, psychological, and social wellbeing. According to Payton (2009), *psychological distress* tends to be positively associated with poorer mental health.

Sojourner Adjustment is the process of psychological and sociocultural adjustment of short-term residents in a foreign environment (Church, 1982).

Binge Drinking, or *Heavy Episodic Drinking*, is the consumption of five or more standard drinks in a row for men, and four or more standard drinks in a row for women (Wechsler & Nelson, 2001).

High-risk drinking is the consumption of alcohol in a way that puts an individual at risk for negative alcohol-related consequences (Smith, Finneran, & Droppa, 2014). This term is sometimes used interchangeably with *binge drinking* in the literature, as binge drinking increases the risks of alcohol-related consequences (Wechsler & Nelson, 2001).

A *Standard Drink* is commonly defined as a 12-ounce beer or wine cooler, a 5-ounce glass of wine, one drink containing a shot (1.5 ounces) of 80-proof alcohol, or one shot (1.5 ounces) of 80 proof alcohol (Bergen-Cico & Kilmer, 2010).

Drinking Motives are the underlying reasons that individuals choose to drink (Cooper, 1994).

Alcohol-Related Consequences are the negative outcomes including, but not limited to, emotional, academic, physical, sexual, and legal problems that occur as a result of drinking alcohol (Hingson, Zha, & Weitzman, 2009; Hummer et al., 2010).

Chapter II: Literature Review

Introduction

In order to provide a rationale for this study, three bodies of literature were reviewed: college student mental health, college student drinking and related consequences, and drinking and associated consequences among American college students who study abroad. First, an examination of literature on college student mental health was conducted, emphasizing the vulnerability of students in the traditional college years, ages 18-24 for a variety of symptoms of psychological distress. Next, the topic of college student drinking was explored, framing the issue as both mental health and public health concerns. The intersection of mental health and drinking was addressed by focusing specifically on some of the more common mental health issues found in the traditional college student population. Finally, an exhaustive literature review was conducted on the topic of drinking and alcohol-related consequences among American college students studying abroad. Gaps in the literature are noted, demonstrating the value of the current study in expanding knowledge on the topic of college student drinking among American college students abroad.

College Student Mental Health

The traditional college years can be a developmentally challenging time for students as they transition from adolescence to adulthood (Cook, 2007; Hunt & Eisenberg, 2010; Steinhardt & Dolbier, 2008). During these years, students are often required to navigate a range of stressors (Cook, 2007; Oswalt & Finkelberg, 1995) such as living in a unfamiliar environment with new people, meeting parental demands and expectations, coping with family problems, establishing new friends (Hunt & Eisenberg, 2010; Mowbray, Mandiberg, Stein, Kopels, Curlin, Megivern,

Strauss, Collins, & Lett, 2006), balancing the workload of academic classes with other responsibilities (Eisenberg, Gollust, Golberstein, & Hefner, 2007b); Steinhardt & Dolbier, 2008), changes in eating and sleeping habits (Steinhardt & Dolbier, 2008), peer pressure, developing intimate relationships (Mowbray et al., 2006), financial strains (Mowbray et al., 2006), racism, and grappling with issues of identity. Further, mental health problems are prevalent in the college student population (Hunt & Eisenberg, 2010; Kenney, Lac, LaBrie, Hummer, & Pham, 2013; Zivin et al., 2009). These problems may be precipitated or exacerbated by the numerous stressors students face during college (Eisenberg et al., 2007b).

Approximately three quarters of lifetime mental health disorders have an initial onset by the age of 24 (Eisenberg, Downs, Golberstein, & Zivin, 2009; Eisenberg et al., 2007b; Kessler, Berglund, Demler, 2005; Zivin, Eisenberg, Gollust, & Golberstein, 2009). While the age range of college students varies, the American College Health Association (2013) estimated that the vast majority (78.5%) of students in the United States are between the ages of 18-24, coinciding with the age of first onset of most mental health disorders (Eisenberg et al., 2007b; Mowbray et al., 2006). In recent years, concerns about the mental health of college students have grown as larger numbers of them are seeking psychological services (Blanco, Okuda, Wright, Hasin, Grant, Liu, & Olfson, 2008; Bushong, 2009; Castillo & Schwartz, 2013; Hartley, 2013; Hunt & Eisenberg, 2010).

The notion that increasing numbers of college students have mental health issues is widely addressed in the literature (e.g., Benton, Robertson, Tseng, Newton, & Benton, 2003; Castillo & Schwartz, 2013; Eisenberg et al., 2007b; Gallagher, 2013; Hartley, 2013; Hefner & Eisenberg, 2009; Hunt & Eisenberg, 2010; Mowbray et al., 2006). According to Gallagher (2013), 95% of directors of college counseling centers reported a trend toward a greater number

of students with severe psychological problems. Mowbray et al. (2006) identified some of the factors that may be contributing to the increases. They include higher levels of competition for admission to colleges and universities; increased tuition costs and financial strains; and the Americans with Disabilities Act (ADA) requirements that colleges and universities provide reasonable accommodations to qualified students with mental and psychological disorders. Additionally, more effective psychiatric medications with fewer side effects, and improved support services have made it more possible today than in the past for students with mental health issues to fulfill the requirements necessary to earn a college education (Hunt & Eisenberg, 2010; Mowbray et al., 2006).

There is debate, however, about whether or not the increased numbers of students with mental health issues are real or perceived (Hunt & Eisenberg, 2010; Mowbray et al., 2006). While there is no doubt that more students with mental health issues are coming into contact with campus health services, it unclear whether the changes are actually a result of increases in the overall prevalence and severity of mental health disorders in the college student population or if these changes reflect increases in help-seeking behaviors (Hunt & Eisenberg, 2010). Hunt and Eisenberg (2010) cited lack of consistent data over time, changes in the stigma associated with mental illness and help-seeking, changes in Diagnostic and Statistical Manual (DSM) diagnostic criteria, and possible improvements in screening for mental illness as some of the challenges and confounding variables in more clearly understanding this issue. They acknowledged, however, that even if the overall prevalence of mental disorders has not increased significantly, there may have been an increase in the prevalence of more severe cases among students, as noted by college mental health providers. Benton et al. (2003) conducted a longitudinal study at a larger Midwestern university over the course of 13 years and found a progressive increase in the

complexity and severity of the issues presented at the school's counseling center (Blanco et al., 2008).

In a recent nationally representative survey of over 123,000 college students, 83% felt overwhelmed, 55.9% felt very lonely, 45% felt hopeless, 31% felt so depressed that it was hard to function, and 51% felt overwhelming anxiety within the past year (ACHA, 2013). In a study conducted by Zivin et al. (2009), more than one third of the college student population had a mental health problem. In another study, Blanco et al. (2008) found that almost half of the college-aged students in their study met the DSM-IV criteria for at least one psychiatric disorder in the previous year.

Common mental health problems in traditional college-aged students include anxiety (Blanco et al., 2008; Cook, 2007; Hunt & Eisenberg, 2010; Norberg, Norton, Olivier, & Zvolensky, 2010; Steinhardt & Dolbier, 2008; Zivin et al., 2009), depression (Castillo & Schwartz, 2013; Cook, 2007; Hunt & Eisenberg, 2010; Steinhardt & Dolbier, 2008; Zivin et al., 2009), eating disorders (Cook, 2007; Zivin et al., 2009), suicidal ideation (Cook, 2007; Hunt & Eisenberg, 2010; Zivin, et al., 2009), self-mutilation and other forms of self-destructive and reckless behaviors (Cook, 2007; Zivin et al., 2009), and substance abuse (Blanco et al., 2008; Castillo & Schwartz, 2013; Cook, 2007; Cranford, Eisenberg, & Serras, 2009; Karroll, 2002). The results of the American College Health Association (2013) identified anxiety as the most frequent issue, and depression as the second most frequent issue for which students sought help.

While anxiety and depression may be the most common mental health issues for which college students seek help, alcohol use disorders are actually the most prevalent and the least treated mental health problem among college students (Blanco et al., 2008; Capron & Schmidt,

2012). Based on the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, almost one-third of college students meet the criteria for a formal diagnosis of alcohol abuse, while one in seventeen college students can be classified as alcohol dependent (Borden et al., 2011; Dodd, Glassman, Arthur, Webb, & Miller, 2010). Male college students are more likely than females (24% versus 13%) to meet the clinical criteria for an alcohol use disorder (Beck, Arria, Caldeira, Vincent, O'Grady, & Wish, 2008; Ham & Hope, 2003).

The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5; American Psychiatric Association, 2013a) collapsed the DSM-IV categories of substance abuse and substance dependence into one disorder, *substance use disorder*, measured on a continuum from mild to severe. In DSM-IV, an individual only needed to one symptom to meet the criteria for substance abuse, however, in the DSM-5, mild substance use disorder requires at least two symptoms (American Psychiatric Association, 2013b). According to Hagman, Cohn, Schonfeld, Moore, and Barrett (2014), there are students who endorse some criteria of an alcohol use disorder (AUD), but do not meet a formal diagnosis. These individuals who meet a sub-threshold number of alcohol use criteria have been labeled "diagnostic orphans" (Hagman et al. 2014). Under the new DSM-5 criteria which are more specific, a substantial proportion of the students who were classified as diagnostic orphans under the DSM-IV, receive an AUD diagnosis (Hagman et al., 2014). However, in a study with 2,620 undergraduate college students, Hagman et al. (2014) found that a significant number of the students who were classified with a DSM-IV diagnosis of alcohol abuse are now classified as diagnostic orphans under the DSM-5 criteria. While many students may not meet diagnostic criteria for an AUD under the DSM-5, there are numerous college students who engage in high-risk drinking behaviors, which can compromise their health and safety, and can lead to a variety of other negative consequences. This study will

investigate the way student mental health changes for students while they are abroad, and the impact that mental health has on alcohol-related consequences for students abroad.

College Student Drinking

In order to better understand causes of alcohol-related consequences for the college student population, it is also critical to understand common drinking patterns of college students. The issue of college student drinking is widely addressed in the literature. Alcohol is the most commonly used drug by American youth (Karroll, 2002), and excessive alcohol consumption among the college student population is considered a significant public health concern (e.g., Borden, et al., 2011; Broadwater, Curtin, Martz, & Zrull, 2006; Ham & Hope, 2003; Wechsler, Dowdall, Davenport, & Castillo, 1995). Although the problematic use of alcohol occurs across many age groups, young adults aged 18–24 years show the highest rates of alcohol use and have the greatest percentage of problems drinkers (Ham & Hope, 2003). Further, when compared to their peers of the same age, college students are considered to be at greater risk for problem drinking (Ham & Hope, 2003; Osberg, Insana, Eggert, & Billingsley, 2011; Wechsler et al., 1995). Studies have shown that approximately 40-45% of students engaged in binge drinking in the past two weeks (Borden, et al., 2011; Broadwater, et al., 2006). Heavy episodic drinking, or binge drinking, is typically defined as four or more standard drinks for a female or five or more standard drinks for a male in a sitting (Broadwater, et al., 2006; Ham & Hope, 2003; Wechsler & Nelson, 2001). Students who binge drink are more likely to experience negative outcomes than those who do not, and the likelihood of experiencing a negative outcome increases with the frequency of binge drinking (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994; Wechsler & Nelson, 2001).

Research has shown that male college students tend to drink larger amounts of alcohol and drink more frequently than female students (Cranford et al., 2009; Ham & Hope, 2003). The gap in the trend seems to be narrowing, however (Khaylis, Trockel, Taylor, 2009; Smith & Berger, 2010). In a national survey, O'Malley and Johnston (2002) found that heavy drinking differences between young adult males and females decreased between the 1980s and 1990s, declining from a 24% difference to a 16% difference (Smith & Berger, 2010).

Additionally, physiological differences between men and women make women more vulnerable to the effects of alcohol. Women absorb and metabolize alcohol less efficiently than men (Smith & Berger, 2010; Wechsler et al., 1995), meaning that equal doses of alcohol consumed by men and women generally result in women having higher blood alcohol concentrations (BACs) (Karroll, 2002). During the menstrual cycle, alcohol is absorbed more quickly than at other times in the menstrual cycle, resulting in higher BACs (Karroll, 2002). These things can make women more susceptible to long-term alcohol-related problems (Smith & Berger, 2010).

The literature has also documented racial differences in terms of alcohol use among college students, and the findings have produced inconsistent results. Caucasian students are considered to have the highest risk for binge drinking (Ham & Hope, 2003; LaBrie, Atkins, Neighbors, Mirza, & Larimer, 2012; O'Malley & Johnston, 2002). Latino/a students are considered to have the second-highest drinking rates (LaBrie et al., 2012a; O'Malley & Johnston, 2002), and some studies have found that they report heavier drinking episodes and more alcohol-related consequences than Caucasians (LaBrie et al., 2012a). Other studies have found that Latinos have a rate of alcohol-related consequences that is lower than Caucasian and Native-American students (Ham & Hope, 2003). African-American students have been found to report

lower levels of heavy drinking and alcohol-related consequences than Caucasian students and Latino students (O'Malley & Johnston, 2002), yet the percentage of African-American students who engage in heavy drinking has increased significantly (Dennhardt & Murphy, 2011).

While few studies have examined substance use in the Native American college student population, it appears that alcohol use among Native American students is somewhat similar to their non-Native American college peers, particularly Caucasian students (Ward & Ridolfo, 2011). Native Americans have also been shown to demonstrate some of the highest rates of alcohol-related consequences among college students (Ham & Hope, 2003).

There are inconsistencies in the findings of previous research conducted with Asian-American students as well. One study found that Asian-American college students had the lowest rates of alcohol-related consequences among college students (Ham & Hope, 2003). However, in a study with 248 self-identified Asian-American students, So & Wong (2006) found that the students used alcohol at a rate similar to other students.

With regards to sexual orientation, gender identity, and drinking, Lesbian, gay, bisexual, and transgender (LGBT) students have been found to engage in heavy episodic drinking more than their heterosexual and cisgender peers. As a result, they may be considered an at-risk group within the college student population for alcohol-related consequences (Ebersole, Noble, & Madson, 2012).

The Relationship Between Mental Health and Drinking in College Students

Understanding the relationship between college student mental health and drinking can also provide insight into influences on alcohol-related consequences for this population. Findings on the relationship between college student mental health and drinking have been inconsistent

(Ham & Hope, 2003; Kenney et al., 2013; Norberg et al., 2010), and the extent to which mental health issues co-occur with substance use problems in the college student population is not well-understood (Cranford et al., 2009). High risk drinking among college students may predispose them to increased suicidality, behavioral impulsivity, social anxiety, and depression (Smith, Finneran, & Droppa, 2014). Additionally, students with mental health issues may use alcohol as a way to self-medicate or suppress negative affect (LaBrie, Kenney, & Lac, 2010b; Lamis, Malone, Langhinrichsen-Rohling, & Ellis, 2010). Research has demonstrated that poor mental health is a strong indicator of alcohol risks (Kenney et al., 2013). Symptoms of psychological distress have been consistently linked to alcohol-related problems (LaBrie et al., 2010). Despite showing increased risk for alcohol-related problems, those with psychological distress have not demonstrated increased alcohol intake (LaBrie et al., 2010b). LaBrie et al. (2010b) theorized that this could be because students with poorer mental health may lack internal regulation, volitional control, or the social resources to help protect themselves against negative alcohol-related consequences.

Depression and Drinking. The connection between depression and alcohol use has been addressed in the literature (Cranford et al., 2009; Dennhardt & Murphy, 2011; Lamis, et al., 2010; Roberts, Glod, Kim, and Hounchell, 2010; Weitzman, 2004), but the findings are conflicting. In a study conducted by Cranford et al. (2009), results indicated that major depression was associated with lower odds of binge drinking. Roberts et al. (2010) conducted a study with 428 undergraduate students and also found that depressed students were not more likely to use and abuse alcohol.

Conversely, Aalto-Setala, Marttunen, Tullio-Henriksson, Poikolainen, & Lonnqvist (2002) found that depression in adolescence predicted a significantly greater risk of psychiatric

disturbance and problem drinking in emerging adulthood. Dennhardt & Murphy (2011) also found that symptoms of depression in both European American and African American students were associated with more alcohol problems. They concluded that depression may be a risk factor for alcohol-related pathology in college students. Like Dennhardt & Murphy (2011), Weitzman (2004) found that students with poor mental health/depression (PMHD) were more likely than students without PMHD to report alcohol-related consequences. The consequences were more pronounced for females, who experience depression at a greater prevalence than do males (Eisenberg et al. 2007; Mirowsky, 1996), but it was not clear from the results whether females with depression experienced more alcohol related consequences or if they were more likely to report their consequences (Weitzman, 2004). Finally, while students with PMHD were also more likely to report drinking to get drunk, they did not drink more than their peers without PMHD.

Suicidal Behavior and Drinking. Suicidal ideation is often associated with depression, and approximately 11% of college students report having seriously considered a suicide attempt during the past year (Barrios, Everett, Simon, & Brener, 2000). Suicide is the third leading cause of death in the U.S. college student population (Barrios et al., 2000; Farabaugh et al., 2012; Lamis et al., 2010). According to the professional literature, suicidal behavior and substance use may have a bidirectional relationship (Brener, Hassan, and Barrios, 1999). Alcohol use has been found to precede suicidal ideation and behavior (Farabaugh et al., 2012; Reifman, & Windle, 1995), and suicidal ideation may precede substance use (Brener et al., 1999). Alcohol problems in the college student population are connected to increased rates of suicidal ideation and attempts (Brener et al., 1999; Gonzalez, 2012). Studies suggest that alcohol may increase impulsivity (Lipschitz, 1995), decrease inhibition (Lipschitz, 1995), impede coping skills

(Gonzalez, 2012; Hufford, 2001) and cognitive functioning (Hufford, 2001), increase aggression (Gonzalez, 2012; Hufford, 2001), and worsen mood (Gonzalez, 2012; Hufford, 2001).

College students with suicidal ideation are more likely to binge drink (Brener et al., 1999; Gonzalez, 2012). Gonzalez (2012) found that binge-drinking students who had a suicide attempt history were significantly more likely to engage in solitary binge drinking, putting them at an alarming risk for increased suicidal behavior. Additionally, Barrios et al. (2000) found that students with suicidal ideation were more likely to engage in injury-related risk behaviors such as driving while intoxicated.

Anxiety and Drinking. Anxiety is the most frequently reported issue by college students (ACHA, 2013; Baez, 2005), and clinical levels of anxiety are often associated with increased risk of depression, suicidal thoughts, and substance abuse (Baez, 2005; Olfson, Marcus, Wan, & Geissler, 2004). While a connection between anxiety disorders and alcohol use disorders has been well documented in the literature demonstrating an increased likelihood of developing an alcohol or anxiety disorder when the other condition is present, few studies have focused on the relationship between generalized anxiety disorder (GAD) and alcohol (Goldsmith, Thompson, Black, Tran, & Smith, 2012). People with generalized anxiety have a pervasive pattern of worry that is difficult to control and often use alcohol as a coping mechanism (Goldsmith et al., 2012). Cranford et al. (2009) found that GAD in college students was associated with higher odds of frequent binge drinking, and that this association was significantly stronger for male students. Goldsmith et al. (2012) found that individuals with high levels of generalized anxiety who expected that alcohol would contribute to tension reduction reported greater alcohol-related consequences than those with lower levels of generalized anxiety with high tension reduction alcohol expectancies.

Another form of anxiety, social anxiety, is characterized by a marked fear of negative evaluation in one or more social situations (American Psychiatric Association, 2013). College students with symptoms of social anxiety may be an at-risk for alcohol-related negative consequences (Norberg et al., 2010; Villarosa, Madson, Zeigler-Hill, Noble, & Mohn, 2014). Studies have demonstrated a significant co-morbidity between social anxiety disorder (SAD) and alcohol use disorders (AUD) (Morris, Stewart, & Ham, 2005), and these disorders tend to co-occur more among women than men (Norberg et al., 2010). Further, females with co-occurring SAD and AUD tend to display greater psychological distress than men with the same diagnosis (Norberg et al., 2010). SAD is also considered a high risk factor for a future AUD (Villarosa et al., 2014).

Research studies that have examined the relationship between social anxiety and drinking have produced inconsistent results (Ham, Bonin, & Hope, 2007; Norberg et al., 2010; Villarosa et al., 2014). Some studies have shown no significant relationship between social anxiety and drinking behaviors and related consequences (Ham, Bonin & Hope, 2007; Ham & Hope, 2005). Other studies have shown a significant relationship (Norberg et al., 2010; Villarosa et al., 2014) Norberg et al. (2010) found that female students were more likely than male students to drink as a way of coping with uncomfortable feelings, and social anxiety was positively related to negative consequences for women. For male students, however, social anxiety had an inverse relationship with negative consequences. Villarosa et al. (2014) found that while students with more social anxiety symptoms reported that they had engaged in more harmful drinking and experienced more negative consequences, they did not report more alcohol consumption than their less socially-anxious peers.

Disordered Eating and Drinking. The combination of disordered eating patterns and

binge drinking are common among college students (Burke, Cremeens, Vail-Smith, & Woolsey, 2010; Giles, Champion, Sutfin, McCoy, Wagoner, 2009; Kelly-Weeder, 2011). Disordered eating behaviors exist on a continuum ranging from excessive concern about weight and body image to binge eating and extreme weight-control measures such as fasting, purging, or compulsive over-exercising (Kelly-Weeder, 2011). For some students, these patterns remain subclinical, while for others, these disordered eating behaviors turn into more serious eating disorders. While both males and females can have eating disorders, as many as 90% of the cases are in the female population (Striegel-Moore & Cachelin, 2001), with a median age of onset between 18-21 years of age (Kelly-Weeder & Edwards, 2011).

The co-morbidity of eating disorders and substance use, particularly among women, has been well documented (Dansky, Brewerton, & Kilpatrick, 2000; Grilo, Sinha, & O'Malley, 2002; Khaylis et al., 2009; Krahn, Kurth, Gomberg, and Drewnoski, 2005). According to Kelly-Weeder, (2011), in the college-aged population, the co-occurrence of disordered eating behaviors and binge drinking has been almost exclusively studied in women. However, in a study with 211 students (139 female and 72 male), Kelly-Weeder (2011) found that while 63% of the females and 83% the males engaged in binge drinking in the past two weeks, there was no significant gender difference in terms of binge eating behaviors.

Behaviors such as dieting and bingeing combined with alcohol use can lead to increased negative alcohol-related consequences (Kelly-Weeder & Edwards, 2011; Krahn et al., 2005). Krahn et al. (2005) found that dieting and bingeing severity were positively associated with the both the prevalence and intensity of alcohol use and with negative consequences associated with drinking. In their study, the more severe dieters were much more likely to report negative alcohol consequences. Similarly, Kelly-Weeder and Edwards (2011) found that women who engaged in

binge eating and binge drinking behaviors experienced more negative consequences than those who did not.

Another type of behavior identified in the literature is the restricting of caloric intake by individuals specifically on drinking days in order to become intoxicated more quickly or to avoid weight gain (Burke et al., 2010; Giles et al., 2009). Both male and female students have been found to engage in this restricting behavior, termed "Drunkorexia" by the media (Burke et al., 2010), although there appears to be a higher prevalence among females. Giles et al. (2009) found that restricting food on drinking days was significantly associated with an increased likelihood of getting drunk. Further, students who engaged in restricting behaviors, particularly women, had a greater likelihood of experiencing negative alcohol-related consequences (Giles et al., 2009).

While these studies exploring the association between college student mental health, drinking, and related consequences have produced inconsistent results, a sufficient number of them found that students with mental health issues demonstrated increased alcohol-related consequences (e.g., Barrios et al., 2000; Dennhardt & Murphy, 2011; Keely-Weeder & Edwards, 2011; Krahn et al., 2005; Norberg, 2010; Weitzman, 2004), providing evidence for the need for further research. This study will attempt to extend the current knowledge on this topic by investigating the impact that student mental health and drinking have on alcohol-related consequences for students abroad.

Alcohol-Related Consequences

Problems associated with excessive alcohol consumption among the college student population have been well documented. In addition to adverse health effects, alcohol use can impair cognitive and motor abilities (Testa, Van-Zile Tamsen, & Livingston, 2007), increasing

susceptibility to a wide range of negative consequences. Poor academic performance (Borden et al., 2011; Hummer, Pedersen, Mirza, & LaBrie, 2010; Casey & Dollinger, 2007; LaBrie, Hummer, Neighbors, & Larimer, 2010a; Perkins, 2002), college policy violations (Smith & Berger, 2010; Wechsler et al., 1994); health risks (Burke et al., 2010; Karroll, 2002; Smith & Berger, 2010); blackouts (Jellinek, 1946; Mundt & Zakletskaia, 2010; Smith, Finneran, & Droppa, 2014); risky sexual behavior (Borden et al., 2011; Dodd et al., 2010; Hummer, et al., 2010; LaBrie et al., 2010; Perkins, 2002; Wechsler et al., 1994); sexual assault (Mouilso, Fischer, & Calhoun, 2012; Smith et al., 2014; Wechsler et al., 1994); unintentional injury (Casey & Dollinger, 2007; Dodd et al., 2010), damaging property (Wechsler et al., 1994); assault (Borden, et al., 2011; Ham & Hope, 2003; LaBrie, et al., 2010a; White, Park, & Cordero, 2010); driving while intoxicated (Borden, et al., 2011; Casey & Dollinger, 2007; Ham & Hope, 2003; LaBrie, et al., 2010a; White, Park, & Cordero, 2010), and death (Borden, et al., 2011; Ham & Hope, 2003; LaBrie, et al., 2010a; White, Park, & Cordero, 2010) are some of the negative consequences associated with high-risk student drinking. Researchers have found that college students who engage in high-risk drinking experience half of all negative consequences reported by all drinkers (White et al., 2010).

Some types of consequences are more unique to females due to physiological differences. Because females do not absorb and metabolize alcohol as efficiently as males, they are more likely to experience medical harm after consuming less alcohol in shorter periods of time than men (Karroll, 2002). Heavier drinking among women can negatively impact reproductive health and cause problems such as increased infertility, painful menstruation and greater premenstrual discomfort (Karroll, 2002). Further, women are more susceptible to long-term problems such as

liver damage, heart disease, and breast cancer as a result of their alcohol use (Smith & Berger, 2002).

Heavy drinking can also put women at risk for sexual assault. Researchers have found that frequency of alcohol use and frequency of binge drinking predict occurrences of sexual assault victimization (Mouilso et al., 2012), and a large proportion of sexual victimization incidents involve alcohol use (Testa et al., 2007). Cognitive impairments resulting from alcohol use can make it more difficult for women to recognize danger, and some men may target women who are drinking because they perceive them to be more sexually available. Further, some men may encourage women to drink so that they can take advantage of them sexually (Testa et al., 2007).

Regardless of gender, heavy drinking significantly increases an individual's risk of experiencing alcohol-induced memory impairments (White, Jamieson-Drake, & Swartzwelder, 2002). These memory impairments can range from minor to more severe, and as the amount of alcohol an individual consumes increases, the memory impairments can include blackouts. Blackouts are episodes of anterograde amnesia that render an individual unable to recall entire events that occurred while intoxicated (White et al., 2002). An individual in an alcohol-induced blackout is capable of walking, talking, driving, or engaging in other activities, however the individual is unable to form new, long-term memories (Mundt & Zakletskaia, 2012). Approximately one in four college students has experienced a blackout in the past year, and almost one half of all college students who drink have experienced at least one blackout in their lifetime (Mundt & Zakletskaia, 2012). Further, students who experience alcohol induced memory blackouts that are associated with high-risk drinking are at greater risk for injury than other students (Mundt & Zakletskaia, 2012; Smith et al., 2014; White et al., 2002).

Mundt & Zakletskaia (2012) conducted a study with 954 students who were identified as high-risk drinkers and found that those who experienced blackouts six or more times in the previous year were 70 percent more likely to be treated in the emergency department during the two year follow up period than those who did not experience blackouts. White et al. (2002) found in a study with 772 students that the total number of blackouts were linked with other indicators of problem drinking. The students in their study who had experienced three or more blackouts drank more heavily in the two weeks prior to the survey, started drinking at earlier ages, had lower GPAs, and were more likely than others to have heard concerns expressed by others about their drinking (White et al., 2002). Both White et al. (2002) and Mundt and Zakletskaia (2012) found that although men drank more heavily and more frequently than women, women were equally as likely to experience an alcohol-induced blackout. This suggests that women are at risk of experiencing blackouts at lower levels of alcohol consumption (White et al., 2002). Further, because women metabolize alcohol more slowly than men, they experience intoxication more quickly and intensely than men (Labrie, Kenney, Lac, Garcia, & Ferraiolo, 2009; Smith & Berger, 2010).

In 2005, approximately 1825 college students ages 18-24 died from alcohol-related unintentional injuries (Hingson, Zha, & Weitzman, 2009; Mundt & Zakletskaia, 2012; Smith et al., 2014). According to Hingson et al. (2009), these estimates are conservative for several reasons. First, this number does not include alcohol-related homicide and suicide deaths. Next, the estimates for the number of alcohol-related traffic deaths among 18-24 year old college students, and the estimates for the number of non-traffic alcohol injury deaths among 18-24 year old college students were made based on a rate proportional to the total population of 18-24 year olds. In fact, college students between these ages are both more likely to engage in binge

drinking and to drive under the influence than non-college attending 18-24 year olds Hingson et al, 2009).

According to Perkins (2002), it appears that male college students who drink tend to have more alcohol-related negative consequences than females. For example, male students often have more consequences for themselves and others that involve public deviance. However, when considering consequences that involve damage to self and more private consequences such as poor academic performance, unintended sexual activity, memory loss, hangovers, nausea, blackouts and injury to self, females also experience alcohol-related negative consequences (Ham & Hope, 2003; Perkins, 2002). There were no gender differences when considering both types of negative consequences (Perkins, 2002). In the literature, negative consequences are often measured by experiences of men (Ham & Hope, 2003). This could therefore be considered a limitation to studies in which gender differences were found in terms of alcohol-related consequences (Ham & Hope, 2003).

Student-athletes are a sub-group of students that is considered at-risk for heavy drinking and alcohol-related consequences (Doumas, 2013; Grossbard, LaBrie, Hummer, Pederson, & Neighbors, 2009; Turrisi, Mallett, Mastroleo, & Larimer, 2006). Students who participate in varsity, intramural, or club sports have been found to drink more heavily and more frequently than students not involved in athletic activities (Doumas, 2013; Doumas, Turrisi, Coll, & Haralson, 2007). Pressure to perform (Doumas, 2013), overestimation of the amount other student-athletes drink (Doumas, 2013; Grossard et al., 2009), and isolation from the larger campus community (Doumas, 2013) are several reasons cited for heavier drinking by student-athletes. In addition to experiencing other types of negative consequences, student-athletes may

also risk suspension from their team due to academic or athletic performance deficits that are a result their high-risk drinking (Doumas, 2013; Grossard et al., 2009).

Students who are members of sororities or fraternities are another group of students that are considered at-risk for heavy drinking and related consequences (Ham & Hope, 2003; Park, Sher, & Krull, 2008; Scott-Sheldon, Carey, & Carey, 2008; Wechsler et al., 1995). In a study conducted by Wechsler et al. (1995), residence in a Greek house was the strongest correlate of college-student binge drinking (Park et al., 2008). Borsari and Carey (1999) identified some key themes that emerged in a review of the literature on fraternity drinking. First, students who are already heavy drinkers are more likely to join a fraternity. Once in a fraternity, an individual continues to be exposed to social situations that encourage heavy drinking. Misperceptions about the alcohol use of others, known as drinking norms, contributes to the perpetuation of use, and the physical environment of a fraternity house can contribute to alcohol abuse by protecting students from potential sanctions they might receive in another campus location (Borsari & Carey, 1999). Additionally, Park et al. (2008) found that heavy drinking and alcohol-related consequences by members of the Greek system may be attributed to the socio-cognitive and the physical environments of Greek organizations. Finally, Scott-Sheldon et al. (2008) found heavier alcohol use among members of Greek organizations, and an association between Greek status and having sex under the influence of alcohol.

Understanding Alcohol-Related Consequences Among American College Students Studying Abroad

Another group that may be at risk for alcohol-related consequences is American college students who are studying abroad (Pedersen, Cruz, LaBrie, & Hummer, 2011a; Pedersen, LaBrie,

& Hummer, 2009; Pedersen, Larimer, & Lee, 2010b; Pedersen, Skidmore, & Aresi, 2014). While study abroad experiences can enhance cross-cultural skills and global understanding (Goldstein & Kim, 2006; Pedersen et al., 2010b) and can promote personal development (Hunley, 2010; Pedersen et al., 2010b; Wielkiewicz & Turkowski, 2010), American college students participating in study-abroad programs have been found to double their weekly alcohol use while abroad (Pedersen et al., 2010b; Pedersen et al., 2014).

A variety of factors that may contribute to increased college student drinking abroad have been identified in the literature. Lower drinking-age limits allow students to purchase alcohol and drink in public (Hummer et al., 2010; Pedersen et al., 2009; Pedersen et al., 2010b). In densely populated cities, students may be in closer proximity to places where alcohol is available (Hummer et al., 2010). Alcohol may also be available during orientation or at other campus-sponsored social events (Hummer et al., 2010). Finally, depending on the country, students may be studying in countries where alcohol is a common part of daily life (Pedersen et al., 2010b; Pedersen et al., 2014).

According to Pedersen et al. (2012), it is when drinking increases above moderate amounts that consequences begin to emerge. Study abroad students potentially face a range of alcohol-related consequences that are unique to the study abroad context (Hummer et al., 2010; Pedersen et al., 2010b; Pedersen et al., 2012; Pedersen et al. 2014). These consequences may include legal problems with the foreign government; academic sanctions from both the home institution and the study abroad program; putting oneself in dangerous situations with locals in the host country; missing flights or excursions; being disrespectful or offensive to a host family or international program staff; and contributing to the negative stereotypes of Americans (Pedersen et al., 2010b; Pedersen et al., 2014). Additionally, female students abroad may be at

greater risk for sexual assault, particularly those studying in non-English speaking countries (Kimble, Flack, & Burbridge, 2013). Alcohol alone, however, may not explain the substantial variance in experience of alcohol-related problems experienced by students abroad. Factors such as lack of familiarity with surroundings and resources, impaired judgment regarding the safety of the immediate surroundings, language barriers and deficiencies in comprehending the nuances of local culture and laws may increase the potential for negative outcomes (Hummer et al., 2010).

Researchers have identified numerous factors that may be associated with increased drinking and alcohol-related consequences for American college students abroad. They include: demographic factors (Hummer et al., 2010; Pedersen et al., 2010b; 2014), other student-related factors (Pedersen et al., 2014), pre-departure drinking behaviors (Pedersen et al., 2010b; 2014), intentions to drink while abroad (Hummer et al., 2010; Pedersen et al., 2009; 2010a; 2010b), perceived drinking norms (Pedersen et al., 2009; 2010b; 2011), region of study/location of program (Pedersen et al., 2010b; 2011a; 2014), living arrangements abroad (Pedersen et al., 2014), sensation seeking personality characteristics (Pedersen et al., 2014; Smith & Klein, 2010), student goals for their abroad experience (Pedersen et al., 2014); alcohol expectancies and drinking motives (Hummer et al., 2010; Pedersen et al., 2012; Smith & Klein, 2010), and acculturation/sojourner adjustment (Hummer et al., 2010; Pedersen et al., 2011a; 2012).

Demographic Factors. Although Hummer et al. (2010) found that both females and males appeared to increase their drinking frequency at similar rates while abroad, White, male students have been found to be the highest drinking group of students abroad (Pedersen et al., 2014). Students who are under the age of 21, the legal drinking age in the United States, prior to going abroad have also been found to be at a higher risk for increased drinking while abroad (Pedersen et al., 2010b; Pedersen et al., 2014). Additionally, students with more money to spend

while abroad have been shown to have higher rates of drinking and alcohol-related consequences (Pedersen et al., 2014).

Other Student-Related Factors. Students with lower pre-departure GPAs have been shown to drink more while abroad and to experience more alcohol-related consequences (Pedersen et al, 2014). Additionally, students who are members of a sorority or fraternity tend to drink more and have more drinking related consequences while abroad (Pedersen et al, 2014).

Pre-departure Drinking Behaviors and Intentions to Drink While Abroad

Pedersen et al. (2014) found that pre-departure drinking levels and alcohol-related consequences were strongly associated with drinking levels and related consequences abroad. The literature also demonstrates that some study abroad students may go abroad with the intentions of drinking more (Hummer et al., 2010; Pedersen et al., 2009; Pedersen et al., 2010a; Pedersen et al., 2010b). Students with higher pre-departure intentions to drink have been found to not only drink more alcohol before going abroad, but also to increase their drinking to a greater extent while abroad (Pedersen et al., 2010b). Furthermore, just as heavier drinking college students may self-select into heavier drinking groups and environments, study abroad students may be a self-selecting, heavier drinking group who may choose to study abroad specifically for the opportunity to have greater access to alcohol (Pedersen et al., 2010a; Pedersen et al., 2010b). Pedersen et al. (2010a) conducted a study with a sample of students that included individuals who were planning to study abroad, individuals who had prior study abroad experience, and those who had no intention of studying abroad. They found that both those students who intended to study abroad and those who already had participated in study abroad

experiences drank more and experienced more alcohol-related consequences than those who had no intentions of studying abroad.

Perceived Drinking Norms. Perceived peer use of alcohol has been shown to be a major factor in predicting one's own use of alcohol (Pedersen et al., 2010b; Perkins, 2002). College students often overestimate the amounts and frequency of alcohol consumed by their peers (Broadwater et al., 2006; Pedersen et al., 2009). Social norms theory posits that perceived norms, or perceptions of what is typical for one's peer group, influence behavior (Berkowitz, 2004; LaBrie, Hummer, Neighbors, & Larimer, 2010a). Similarly, according to Social Impact Theory (Latane, 1981), students are most likely influenced by the perceived behaviors of peer groups that are most familiar and closest in proximity to them (Pedersen et al., 2009). Because study abroad students are often a close group with frequent contact, they may be more vulnerable to drinking larger amounts when they perceive that their peers are doing so. Furthermore, students who are heavier drinkers may choose to study in countries where they perceive higher drinking occurs. Pedersen et al. (2009; 2010b) found that students who had higher pre-departure perceived norms of study abroad student drinking demonstrated increases in their drinking behaviors once they went abroad. Additionally, Pedersen et al. (2011b) found that once abroad, students who perceived that others in the environment, including co-nationals and native youth in the host country, drank more than they did were also more likely to increase their drinking.

Region of Study/Location of Program. The country where one chooses to study may impact a student's drinking while abroad, depending on the country's specific normative acceptance and tolerance of the use of alcohol (Pedersen et al., 2010b). Drinking rates have been shown to increase for students who study in countries with drinking rates higher than those in the United States (Pedersen et al., 2011b). Specifically, students who study in Australia, New

Zealand, or Europe demonstrate greater increases in drinking while abroad than students who study in other countries such as Latin America or Asia (Pedersen et al., 2010b). Students who study in urban versus rural settings have also been found to drink more while abroad (Pedersen et al., 2014).

Living Arrangements Abroad. Study abroad experiences often offer increased independence for students (Pedersen et al., 2009). Pedersen et al. (2014) found that students who lived in an apartment with roommates while abroad reported more alcohol-related consequences than those who lived with a host family. It appears that living with a host family could be a protective factor against heavy drinking while abroad. According to Pedersen and colleagues (2014), this could be because students may feel a greater sense of accountability when living with a host family.

Sensation Seeking Personality Characteristics. Within the college student population, sensation seeking has been found to be correlated with alcohol consumption and risky behaviors (Pedersen et al., 2014; Smith & Klein, 2010; Ravert et al., 2009). Pedersen et al. (2014) explored the impact that four aspects of sensation seeking, including experience seeking (e.g., wanting to explore new places), boredom susceptibility (e.g., preferring friends who are exciting or unpredictable), thrill and adventure seeking (e.g., wanting to do things that are frightening), and disinhibition (e.g., enjoying wild parties), had on drinking and drinking related consequences for study abroad students. They found that disinhibition was associated with heavier drinking, and thrill and adventure seeking was associated with greater alcohol-related consequences (Pedersen et al., 2014). Interestingly, experience seeking and boredom susceptibility did not have a significant relationship with drinking and related consequences abroad. Pedersen et al. (2014) theorized that these two aspects of sensation seeking may be common among most students who

choose to study abroad. Smith & Klein (2010) found that disinhibition sensation seeking was associated with alcohol risk-taking.

Student Goals for their Abroad Experience. College students often have different goals for their study abroad experience (Kitsantas, 2004). Kitsantas (2004) identified three particular goals communicated by students, including enhancing cross-cultural skills, becoming more proficient in a subject, and socializing. Pedersen et al. (2014) examined the way these pre-departure goals related to student drinking abroad. Not surprisingly, students who indicated that socializing was an important goal were likely to drink more than students who did not indicate this was as much of a priority. Studying culture or a foreign language appeared to serve as a protective factor against heavy drinking (Pedersen et al., 2014).

Alcohol Expectancies and Drinking Motives. According to Bandura's (1977) expectancy value theory, motivation is regulated by the expectation that a particular behavior will yield a particular outcome. An individual must value an outcome in order to increase the behavior associated with that outcome. Some individuals perceive the effects of alcohol to be more highly desirable, and research has demonstrated that greater expectations surrounding the use of alcohol are associated with increased use and alcohol-related problems (Ham & Hope, 2003). Hummer et al. (2010) examined the impact that alcohol expectancies had on both alcohol-related negative general consequences and alcohol-related sexual consequences for study abroad students. While they found that pre-departure expectations for the role alcohol would play in the study abroad experience had a strongly predictive relationship with the two categories of negative consequences, the relationship was negative for sexual consequences. In a study with female students who went abroad for a three-week academic course, Smith and Klein (2010) also

found that students who had alcohol expectancies related to social enhancements were more likely to engage in risky alcohol use.

Similar to Bandura's (1977) expectancy value theory, motivational models of alcohol use assume that people drink to achieve particular valued outcomes. Additionally, motivation models assume that drinking behavior is motivated by different needs and is therefore characterized by unique patterns of antecedents and consequences (Cooper, 1994; Cutter & O'Farrell, 1984). According to Cooper (1994), understanding drinking motives can provide insight into the circumstances for an individual's drinking, the amount the individual is likely to drink, probable consequences, and possible interventions. Cooper (1994) created a four-item measure for drinking motives, and these motives have been shown to have moderate relationships with alcohol-related consequences among college students (Martens, Rocha, Martin, & Serrao, 2008). Pedersen and colleagues (2012) assessed study abroad students' drinking motives to determine whether or not they drank for coping motives (e.g., to forget your worries), social motives (e.g., to be sociable), conformity motives (e.g., because you felt pressured by peers to drink), or enhancement motives (e.g., because you like the feeling). Social drinking motives were the only motives that contributed to risks for drinking related consequences abroad (Pedersen et al., 2012). However, students in the study who had high coping motives and low social interaction with locals were also at an increased risk for experiencing alcohol-related consequences (Pedersen et al., 2012). The current study explored the impact that drinking motives had on alcohol-related consequences for students who were studying abroad.

Sojourner Adjustment. Researchers (Hummer et al., 2010; Pedersen et al., 2011a; 2012) have also examined the way that aspects of psychological and sociocultural adjustment impact American college students' drinking and associated consequences while abroad. Some

students experience anxiety while abroad as a result of their lack of familiarity with social norms and language (Hummer et al., 2010). Students who have higher levels of culture-related social anxiety while abroad have been found to experience more negative alcohol-related consequences, including sexual negative consequences, than those who have not experienced culture-related anxiety (Hummer et al., 2010). Hummer et al. (2010) also found that students who perceived greater differences between their host and home cultures also experienced more alcohol-related consequences.

Students who spend more time interacting socially with co-nationals and those who experience homesickness and feel out of place are at greater risk for alcohol-related consequences abroad (Pedersen et al., 2012). Pedersen et al. (2011a) also found that individuals who had higher scores for separation acculturation, a style representing greater attachment to home country while abroad, were likely to engage in heavier alcohol consumption while abroad. Further, they found that greater interaction with host nationals, focus on developing and using a foreign language, and identification with the host culture predicted decreased rates of alcohol-related consequences abroad (Pedersen et al., 2012). Surprisingly, however, Pedersen et al. (2012) found that cultural understanding and participation in the culture predicted alcohol-related consequences. This result was unanticipated. Congruent with the study conducted by Pedersen et al (2012), the current study also investigated the impact that Sojourner Adjustment had on alcohol-related consequences for students abroad in hopes of adding further clarity regarding predictor variables.

Thus far, this review has explored the topic of college student mental health, highlighting mental health issues that are common among the traditional college student population. The topic of college student alcohol abuse has also been examined in depth, and the relationship between

mental health and drinking among college students has been addressed. A range of alcohol-related consequences has been identified, in addition to factors that may put a student at risk for alcohol-related consequences. Finally, the topic of study abroad and drinking among students has been explored, providing an overview of major themes relevant to understanding the topic of college student drinking and alcohol-related consequences for American study abroad students.

Comprehensive Review of Research Most Relevant to Current Study

This section will provide a summary of key studies that have explored the topic of drinking among American college students abroad. Study designs, findings, and limitations will be highlighted after each study is described, helping to provide further context for the current study which will be addressed after each study is described.

Pedersen et al. (2009) conducted a study with college students who were participating in a spring semester program. Two weeks before departing for their trip abroad, 91 students (60, females, 31 males; 64% White, 12% Hispanic/Latino, 8% mixed ethnicity, 6% Asian/Pacific Islander, and 10% other ethnicities) completed an online baseline survey which included demographic questions and asked students about their intentions to drink while abroad, their perceptions of the drinking behaviors of a typical student from their university who studies abroad, and the number of drinks they consumed on each day of a typical week using the Daily Drinking Questionnaire (DDQ: Collins, Parks, & Marlatt, 1985). Only 61 students completed the follow-up survey, which was sent ten weeks into the study abroad experience. The follow-up survey included questions about participants' daily drinking only (DDQ: Collins et al., 1985).

Findings from Pedersen et al.'s (2009) study showed that pre-abroad perceived drinking norms were associated with pre-abroad intentions to drink ($r = .46$, $p < .001$) and with drinks per

week while abroad ($r = .57$, $p < .001$). The number of drinks one indicated that one intended to drink once abroad was moderately correlated with actual drinks consumed per week while abroad ($r = .66$, $p < .001$). A small effect size for increased drinking was revealed ($d = .23$). While the overall drinking of students in this study did not increase significantly while abroad, the connection between pre-abroad perceived norms and increased drinking while abroad highlights the impact that perceived norms can have for student drinking in the study abroad context. The small sample size is the greatest limitation of this study. As a result, it did not allow for analyses of moderators to be conducted.

Hummer et al. (2010) conducted a study over two successive spring semesters to examine changes in the quantity and frequency of alcohol consumption, and alcohol-related negative consequences experienced by males and females abroad. One hundred fifty-two (103 females, 49 males; 66% White, 9% Hispanic/Latino, 9% Asian/Pacific Islander, 7% mixed ethnicity, and 9% other ethnicities) college students participated in the study (121 participants at follow-up). Participants completed a pre-departure survey four to six weeks prior to departure. The pre-departure survey consisted of demographic items, questions about their daily drinking behaviors (DDQ; Collins et al., 1985), and 13 researcher-generated questions about their expectations of the role alcohol would play in their study abroad experience. At follow-up, ten weeks into the abroad experience, participants were asked about general alcohol consequences abroad using the 24-item Brief Young Adult Alcohol Consequences Questionnaire (BYAACQ; Kahler, Strong, & Read, 2005), sexual alcohol-related consequences abroad using a researcher-generated list of six items, and two questions to assess their perception of difference between their host and home culture and their experience of anxiety in relation to the host culture.

Hummer et al. (2010) found that males and females both increased their use of alcohol abroad, and that they increased their frequency of alcohol use at similar rates, while not changing their average amount consumed per occasion. A repeated measure analysis of variance revealed a main effect for time regarding changes in the frequency of drinking, $F(1, 89) = 21.38$, $p < .001$, however there was no main effect for time regarding drinking quantity. Male students were more likely than females to reporting having said or done embarrassing things while drinking ($\chi^2 = 3.94$, $p < .05$); woken up in an unexpected place ($\chi^2 = 8.72$, $p < .05$); spent too much time drinking alcohol ($\chi^2 = 5.76$, $p < .05$); and done impulsive things ($\chi^2 = 4.33$, $p < .05$). Females, however, were more likely than males to report less energy and feeling tired after drinking ($\chi^2 = 4.79$, $p < .05$).

In a regression model of a Poisson distribution where gender and location of program (Europe vs. non-Europe), drinking days frequency and quantity, pre-departure expectations of drinking abroad, and the two cultural items were entered as predictors, and alcohol-related problems in the past month was entered as the dependent variable, Hummer et al. (2010) found the model was significant ($\chi^2 = 135.08$, $p < .001$). Gender and location of study did not predict number of consequences, but significant effects were found for frequency, quantity, expectations, perceived difference in cultures and social anxiety in the culture.

In terms of sexual alcohol-related consequences, a model including gender, location of program, drinking frequency, quantity, pre-departure expectations of drinking while abroad, and the two culture items was significant ($\chi^2 = 19.63$, $p < .01$). However, when gender and program location were held constant, only quantity, pre-departure expectations of drinking, and culture-related social anxiety predicted sexual consequences.

The relatively small sample size could be considered a limitation to this study. Further, the use of only one question to assess participants' perceptions of difference between culture, and only one question to assess culture-related social anxiety could be considered a threat to construct validity.

Pedersen et al. (2010a) conducted an online cross-sectional study with a sample of 2144 college students (1220 females, 924 males; 47% Caucasian, 37% Asian, 5% Hispanic/Latino, 1% Black/African-American, 10% multiple ethnicities) to examine differences in alcohol use and related consequences among students who were planning to study abroad at some point during their college years, students who had no intention of studying abroad, and students who had previously studied abroad. In addition to demographic questions, students were asked about their daily drinking in a typical week (DDQ; Collins et al., 1985), they completed the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993), an assessment to look at early signs of alcohol dependence resulting from harmful patterns of use, and they completed a modified version of the Rutgers Alcohol Problem Index modified (RAPI; White & Labouvie, 1989) that asked about their experience with alcohol-related problems in the past month. Two additional items were included to assess driving after drinking more than two drinks and driving after drinking more than four drinks.

A multivariate analysis of variance revealed and overall main effect for the group of students that reported an intention to study abroad (Wilk's $\lambda = .97$, $F(6, 4058) = 11.08$, $p < .001$). Between subjects tests revealed a significant difference among the three groups (those planning to study abroad, those not intending to study abroad, and those who had already studied abroad). They found that students who had no intention to study abroad reported drinking fewer drinks and had lower AUDIT scores than the other two groups of students. Students who were intending

to study abroad reported having more alcohol-related consequences than students not intending to study abroad. Students with previous study abroad experience also reported more drinking and more hazardous drinking than those not intending to study abroad.

Pedersen et al. (2010a) noted that the use of a cross-sectional design relying on the collection of data at one site and the use of self-report measures could be considered limitations to the generalizability of results. Further, they did not assess whether or not those with prior study abroad experience had actually completed the programs while in college.

Pedersen et al. (2010b) conducted a longitudinal study in order to get an in-depth look at factors associated with changes in the number of drinks per week consumed by students while abroad. One hundred seventy-seven students (83% females, 17% males; 73% White, 16% Asian/Pacific Islander, 5% mixed ethnicity, 5% other ethnicities) participated. At baseline, two weeks before going abroad, students completed the pre-departure survey consisting of demographic questions, the Drinking Norms Rating Form (DNRF; Baer, Stacy, & Larimer, 1991), used to assess participants' perceptions of the average weekly drinking of a typical study abroad student in their host country, and a modified DDQ (Collins et al., 1985) to estimate how much they intended to drink on each day of a typical week while abroad. An open-ended question assessed peak drinks consumed on one occasion was also included.

One month after returning home from study abroad, students completed the post-return survey which required them to fill out a DDQ for three time periods: the first month of the trip, the last month of the drink, and the period after returning home. Participants also indicated peak drinks for each of the time periods. A repeated measures ANOVA showed a significant change in drinks per week over time, $F(2, 350) = 45.88$, $p < .001$; an effect, which according to Pedersen

et al. (2010b), could best be explained by a quadratic relationship where drinking more than doubled during study abroad experiences then was subsequently reduced upon return to the United States, $F(1, 175) = 57.25$, $p < .001$.

Using a repeated measures ANOVA with two time points (pre-departure and post-return) and abroad drinking entered as a covariate, a significant time × abroad drinking interaction was found, $F(1, 174) = 6.32$, $p < .05$, with heavier drinking students abroad returning home drinking at higher levels. Students who studied in Europe and Oceania (Australia and New Zealand) experienced greater changes in drinking over time than students in who studied in other regions, with both the linear, $F(4, 171) = 2.81$, $p < .05$, and the quadratic relationships, $F(4, 171) = 5.91$, $p < .001$ significant for the interaction. Students who studied in Latin American drank at significantly higher post-return rates compared to their pre-departure drinking levels, $t(21) = 2.35$, $p < .05$. Underage participants experienced showed increases in their drinking while abroad by 170%. Students with higher pre-departure intentions to drink drank more alcohol before going abroad and increased their drinking to a greater extent while abroad than those with low drinking intentions at pre-departure, $F(1, 170) = 13.28$, $p < .001$. Finally, participants with higher pre-departure perceptions of the drinking norms of other study abroad participants in their host country drank more and increased their drinking to a greater extent than those with lower perceived norms, $F(1, 170) = 7.04$, $p < .01$.

The use of retrospective data collection was perhaps the greatest weakness of this study. In the post-return study, students were asked to recall their drinking behaviors from several points in their semester abroad, and this could have impacted the accuracy of the information they provided. Additionally, women and ethnic minorities were overrepresented in the sample compared with national statistics.

Smith and Klein (2010) investigated risky drinking behaviors in a group of 55 college women (ethnicities were not reported) who traveled abroad for three weeks for an academic course. The pretest assessed participants' current alcohol-use behavior, which also included a question regarding heavy episodic drinking. Additionally, participants completed the disinhibition sensation-seeking subscale of the Sensation-Seeking Form V scale (Zuckerman, 1994) and an adapted version of a positive alcohol expectancies measure (Johnston, O'Malley, & Bachman, 2000) to assess their social expectations surrounding alcohol use. Finally, they answered several questions about expectations for the development of social relationships for their time abroad.

The posttest was conducted after participants returned to the United States. The measure included a measure of heavy episodic drinking for participants' time abroad, a measure assessing their social relationships while abroad, and two open-ended qualitative measures assessing reasons for using alcohol during their time abroad. To determine whether the students in the abroad group differed prior to going abroad from peers who did not travel abroad, pretest data were collected from a comparison group of women from the same institution who were not planning to travel abroad. The comparison group was comprised of 33 women with a median age of 18 years old. Smith and Klein (2010) ran t-test analyses to determine whether or not there was a difference between the groups on alcohol use variables, disinhibition sensation-seeking, social enhancement alcohol expectancies, and expectations for social relationships during the three weeks abroad. Results indicated that there were significant differences in expectations or developing close relationships, peers in their travel group ($t = 3.63$, $p = .001$), peers from their home campus ($t = 3.82$, $p = .001$), and peers from outside their home campus ($t = 3.22$, $p = .002$).

Using a multiple logistic regression, Smith and Klein (2010) investigated whether disinhibition sensation-seeking and social enhancement alcohol expectancies predicted heavy episodic drinking for students abroad. They included the pretest measurement of heavy episodic drinking frequency, disinhibition sensation-seeking, and social enhancement alcohol expectancy in the model. The model was statistically reliable $\chi^2 = 34.38$, $p < .001$ indicating that the predictors reliably distinguished the women who engaged in heavy episodic drinking from those who did not. Alcohol use at the pretest did not predict participation in heavy episodic drinking abroad, but disinhibition sensation-seeking alcohol expectancies related to social enhancement did predict participation in heavy episodic drinking.

A Chi square analysis demonstrated that the non-heavy drinking participants ($n = 27$) and the heavy episodic drinking participants ($n = 16$) differed significantly in the reasons they used alcohol ($\chi^2 = 7.74$, $p < .05$). In the qualitative responses, the women who reported heavy episodic drinking were more likely to comment that alcohol enhanced their social relationships while abroad. Among students who did not engage in heavy drinking while abroad, several mentioned feeling a sense of social isolation. Heavy drinking and non-heavy drinking students were equally likely to mention a desire to use alcohol to enhance their cultural experience.

One limitation of this study is the small sample size. Also, the posttest was given to participants after they returned home, rather than while they were abroad, requiring them to remember specific details about their drinking behaviors abroad. Further, given the short duration of their time abroad, the findings of this study may not represent the experiences of students who spend longer periods of time abroad.

Using a longitudinal research design, Pedersen et al. (2011a) examined the relationships between acculturation orientations, perceived and actual norms, and drinking behaviors among college students abroad. Two hundred sixteen students (80% female, 20% male; 71% Caucasian, 20% Asian/Pacific Islander, 1% African American/Black, 5% mixed ethnicity, 3% other ethnicities) completed pre-departure and post return surveys. The pre-departure survey, completed two weeks before participants when abroad, contained the DDQ (Collins et al., 1985), and demographic items. The post-return survey, mailed one month after students returned to the United States, assessed students' daily drinking for the first and last months of their time abroad by having students complete DDQs for each of these time periods. These scores were averaged to yield a variable for typical weekly drinking while abroad. Students also completed two Drinking Norms Rating Forms (DNRF; Baer et al., 1991). One was used to assess students' perceptions of the drinking behaviors for other students in their program who were studying in the same country, and one was used to assess participant's perceptions of drinking behaviors of young adults in the same age range who were natives of the host country. Finally, students completed the Acculturation, Habits, and Interests Multicultural scale for Adolescents (AHIMSA; Unger et al., 2002) to assess for participants' acculturation orientations on one of four acculturation styles outlined by Berry (1998): integrated, assimilated, separated, or marginalized.

Utilizing the World Health Organization's Global Status Report, Pedersen et al. (2011a) compared drinking rates between each of the 39 countries where students studied with those of the United States. They determined that 65% of participants studied in countries with higher drinking rates than the United States. Hierarchical linear regression analyses were conducted entering the country drinking rate comparison in Step One, the two acculturation orientations of

separation and assimilation in Step Two, the normative perception variables for peers from their same university studying in the same host country and for native youth in the host country in Step Three, and the two product terms (acculturation styles and perceived norms) in Step Four.

There were several significant findings. On Step One, there was a main effect for time, $F(1, 216) = 63.43$, $p < .001$ and a main effect for time × drinking rate comparison effect, $F(1, 216) = 13.91$, $p < .001$. Participants who lived in countries with higher per capita drinking rates than the U.S. showed increases in drinking to a greater extent than those who lived in countries with lower drinking rates than the U.S. (Pedersen et al., 2011a). There was a significant time × perceived native norms effect, $F(1, 212) = 20.82$, $p < .001$, and both perceived native norms and perceived study abroad peer norms had a unique positive effect on drinking while studying abroad. There was also a significant time × separation × perceived peer norms interaction effect, $F(1, 210) = 7.3$, $p = .007$. Findings suggested that the separation acculturation style was associated with heavier alcohol consumption abroad. Those who perceived that their co-nationals drank more and that native youth drank more increased their drinking while abroad. Finally, those who separated themselves from the host culture and believed that their peers drank more than they did drank the heaviest. Similar to the method employed by Pedersen et al. (2010b), this study relied on collecting important data about participants' perceptions and behaviors abroad after they returned to the United States. The use of retrospective self-report data is a key limitation of this study. Further, females were overrepresented in the sample.

Using a longitudinal design, Pedersen et al. (2014) conducted a study with 339 college students (78% females, 22% males; 72% Caucasian, 13% Asian, 15% other ethnicities) to examine demographic and pre-departure factors associated with drinking and alcohol-related consequences for students studying abroad. Two weeks before departure, students completed a

baseline survey which included demographic items, a question about affiliation with a fraternity or sorority, and questions about other student factors such as grade point average, prior study abroad experience, college major, and the amount of spending money they allotted for each month of their time abroad. At pre-departure, participants also completed the DDQ (Collins et al., 1985), the RAPI (White & Labouvie, 1989) to assess for alcohol-related consequences, the Brief Sensation Seeking Scale (BSSS; Hoyle, Stephenson, Palmgreen, Lorch, Donohew, 2002) to assess personality factors related to sensation seeking, and the Study Abroad Goals Scale (SAGS; Kitsantas, 2004) to assess their goals related to three factors of cross-cultural competence.

The study consisted of four follow-up data collection points: after the first month abroad, in the last month abroad, equidistantly between the first and last month surveys, and at post return. During the three data collection points while abroad, students indicated their daily drinking in a typical week (DDQ; Collins et al., 1985), and they completed the RAPI (White & Labouvie, 1989) to assess alcohol-related consequences abroad. Finally, at post return, students responded to questions about their study abroad sites including questions about the native language of their host country, the location of the program, the type of program, and their living arrangements while abroad.

Several key findings emerged from this study. Students reported a significant increase in their drinking, $F(1, 309) = 13.14$, $p < .001$. Age, sex, ethnicity, Greek status, pre-departure GPA, spending money abroad, prior study abroad experience, and major area of study contributed to the overall model predicting drinking, $F(22, 595.5) = 13.00$, $p < .001$. Students who were younger, males, White, members of Greek life, those who had lower pre-departure GPAs, and those with more spending money drank more and experienced more alcohol-related

consequences abroad. Students who drank more prior to going abroad and those who had experienced alcohol-related consequences prior to going abroad, and those with sensation-seeking personality traits were more likely to engage in heavier drinking and experience more consequences while abroad. Both females and ethnic minority students were overrepresented in this sample. This may limit the generalizability of the results.

Finally, Pedersen et al. (2012) conducted a study to examine the relationship that sojourner adjustment had on drinking related consequences experienced by students abroad, and the extent to which this relationships was moderated by students' drinking motives. Two-hundred forty-eight students (81% female, 19% male; 69% Caucasian, 20% Asian/Pacific Islander, 2% African American/Black, 2% Native American, 6% mixed ethnicity, 2% other ethnicity) participated in the study. Four weeks after the students returned to the United States, they received a link to an on-line survey. The survey included a modified Daily Drinking Questionnaire (DDQ; Collins et al., 1985) to assess for daily drinking in a typical week while abroad, a modified version of the Rutgers Alcohol Problem Index (RAPI; White & LaBouvie, 1989) which included some consequences specific to study-abroad contexts to assess consequences, the Drinking Motives Questionnaire-Revised (Cooper, 1994) to investigate whether students used alcohol for coping motives, social motives, conformity motives, or enhancement motives, and the Sojourner Adjustment Measure (SAM: Pedersen et al., 2011b) to assess the degree to which participants had engaged in each of the six dimensions of sojourner adjustment during their time abroad. Positive factors on the SAM include Social Interaction with Host Nationals, Cultural Understanding and Participation, Language Development and Use, and Host Culture Identification. Negative factors include Social Interaction with Co-nationals, and Homesickness/Feeling Out of Place.

The results of the study showed that the longer one stayed abroad and the more one drank while abroad, the more consequences one experienced as a result of drinking, χ^2 (2, n = 232) = 313.90, p < .001 (Pederson, et al., 2012). The overall model predicting alcohol-related consequences from the four positive sojourner adjustment factors was significant, χ^2 (6, n = 228) = 347.59, p < .001. Pedersen and colleagues found that three of the four positive SAM factors: Social Interaction with Host Nationals, Language Development and Use, and Host Culture Identification predicted decreased rates of alcohol-related consequences. Unexpectedly, they found that Cultural Understanding and Participation had a significant positive relationship on alcohol-related consequences. They also found that the two negative SAM factors positively predicted negative alcohol-related consequences, χ^2 (8, n = 226) = 381.23, p < .001. The model incorporating the four motives for drinking was significant, χ^2 (12, n = 210) = 475.95, p < .001, however, social drinking motives while abroad was the only form of drinking motives that uniquely predicted consequences (Pederson, et al., 2012). Students with high coping and conformity motives and low positive sojourner adjustment had an increased risk for alcohol-related consequences, and low enhancement and social motives and high positive sojourner adjustment protected against risk for consequences. Finally, students with high conformity motives and high social interaction with co-nationals were also at an increased risk for alcohol-related consequences.

There were limitations to this study, however. Perhaps the most significant limitation was that data were collected four weeks after students returned home from being abroad. This design required students to remember aspects of their experiences that took place several months earlier. This may have influenced students' abilities to accurately recall details of their time abroad. Further, their study did not include other measures of psychological well-being, such as

measures for depression or anxiety (Pedersen et al., 2012). According to Pedersen and colleagues (2012), it is likely that psychological well-being is associated with several of the SAM factors and drinking abroad.

Current Study in the Context of Research

While existing research provides a foundation for understanding the issue of alcohol-related consequences for American students abroad, more research is warranted given the growing number of American students who study abroad annually. Further, because previous research has found a connection between poor mental health and alcohol-related consequences for college students (Hefner & Eisenberg, 2009; Kenney, Lac, LaBrie, Hummer, & Pham, 2013), it is important that this is explored with college students in the study abroad context.

This study attempted to address some of the limitations of previous studies in several key ways. First, rather than collecting data at only one point, data were collected at several points. Further, the second data collection in the current study occurred while students were abroad, rather than after they had returned home from their study abroad programs. This was done so that participants would not have to recall experiences that may have happened several months before as they were required to do in several of the previous studies (Pedersen et al., 2010b; Smith & Klein, 2010; Pedersen et al., 2011a; Pedersen et al., 2012), thereby reducing potential errors in accurately recalling events. Finally, the current study also attempted to garner a solid sample size, and it ended up being larger than samples in several of the other studies (Hummer et al., 2010; Pedersen et al., 2009; Smith & Klein, 2010).

None of the previous studies explored the impact that mental health has on alcohol-related consequences for students abroad, highlighting a significant gap in the literature. Given

that previous research has found a relationship between poor mental health and alcohol-related consequences for college students, a logical next step was to include an assessment of mental health, which was done in the current study. As was done in many of the previous studies, data for this study were collected during a spring semester to enhance the ability to compare results.

This study closely replicated the research conducted by Pedersen et al. (2012) by examining the way that sojourner adjustment and drinking motives impacted alcohol-related consequences for students abroad. However, to build upon what Pedersen and colleagues (2012) did, it also assessed the impact that psychological distress had on alcohol-related consequences. Additionally, this study examined the extent to which mental health predicts sojourner adjustment, providing further insight into the adjustment process for students abroad. As previously mentioned, in order to strengthen the procedures used by Pedersen et al. (2012), the current study included data collection points at pre-departure and while students were abroad rather than after students returned from their study abroad experience.

Chapter III: Methodology

While research has identified some of the factors contributing to alcohol-related consequences for American students abroad, previous studies (Hummer et al., 2010; Hunley, 2010; Pedersen et al., 2010b; Pedersen et al., 2012; Pedersen et al., 2014) have not examined the impact that student mental health has on alcohol-related consequences in the study abroad context. Building upon Pedersen et al.'s (2012) design so that results could be compared to this previous research, the current study investigated the ways that mental health, sojourner adjustment, and drinking motives were related to alcohol-related consequences for American students participating in a study abroad program. Additionally, it explored how mental health changed for college students after going abroad, and whether or not pre-departure mental health predicted sojourner adjustment for the students abroad. This chapter provides detailed information about the research hypotheses, procedures, participants, instruments, and statistical analyses used in the current study.

In order to operationalize the construct of mental health, the Distress Index of the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke et al., 2012) was used. To operationalize sojourner adjustment, the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b) was utilized. To operationalize drinking motives, the Drinking Motives Questionnaire-Revised (Cooper, 1994) was used, and, to operationalize alcohol-related consequences, the Rutgers Alcohol Problem Index modified (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012) was used. These measures will be described in depth in the *Instrumentation* section of this chapter.

Research Hypotheses

The hypotheses for this study were drawn from research conducted on the topics of college student mental health, college student drinking, and college student drinking abroad. The hypotheses were as follows (Table 3.1 displays the Research Questions and corresponding hypotheses):

1) Poorer mental health as measured by an elevated Distress Index score (score that falls in the 70th percentile or above) on the CCAPS-34 will be associated with increased alcohol-related consequences.
2) Higher scores on the Social Interaction with Co-nationals subscale of the Sojourner Adjustment Measure will be associated with increased alcohol-related consequences.
3) Higher scores on the Homesickness/Feeling Out of Place subscale of the Sojourner Adjustment Measure will be associated with increased alcohol-related consequences.
4) Higher scores on the Coping Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.
5) Higher scores on the Social Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.
6) Higher scores on the Conformity Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.
7) Higher scores on the Enhancement Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.
8) Student mental health will decrease while students are abroad as evidenced by increases in Distress Index scores on the CCAPS-34.

9) An elevated score (score that falls in the 70th percentile or above) on the Distress Index of the CCAPS-34 at pre-departure will predict lower sojourner adjustment as demonstrated by higher scores on negative sojourner adjustment scales and lower scores on the positive sojourner adjustment scales.
10) Pre-departure CCAPS-34 Distress Index scores that fall in the low range (score that falls below the 34th percentile) will predict higher sojourner adjustment as demonstrated by higher scores on the positive sojourner adjustment scales and lower scores on the negative sojourner adjustment scales.

Table 3.1. Research Questions, Corresponding Hypotheses, and Tests

Research Questions	Corresponding Hypotheses	Test Used
How does mental health impact alcohol-related consequences for college students studying abroad?	Poorer mental health as measured by an elevated Distress Index score (score that falls in the 70th percentile or above) on the CCAPS-34 will be associated with increased alcohol-related consequences.	Multiple Regression Analysis of a Poisson Process
How does sojourner adjustment impact alcohol-related consequences for college students studying abroad?	Higher scores on the Social Interaction with Co-nationals subscale of the Sojourner Adjustment Measure will be associated with increased alcohol-related consequences.	Multiple Regression Analysis of a Poisson Process
	Higher scores on the Homesickness/Feeling out of place subscale of the Sojourner Adjustment Measure will be associated with increased alcohol-related consequences.	
How do drinking motives impact alcohol related consequences for college students studying abroad?	Higher scores on the Coping Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.	Multiple Regression Analysis of a Poisson Process
	Higher scores on the Social Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.	
	Higher scores on the Conformity Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.	
	Higher scores on the Enhancement Motives subscale of the Drinking Motives Questionnaire-Revised will be associated with increased alcohol-related consequences.	
How does mental health change for college students while they are abroad?	Student mental health will decrease while students are abroad as evidenced by increases in Distress Index scores on the CCAPS-34.	Paired Sample t-tests
Does pre-study abroad mental health predict sojourner adjustment?	An elevated score (score that falls in the 70th percentile or above) on the Distress Index of the CCAPS-34 at pre-departure will predict lower sojourner adjustment as demonstrated by higher scores on negative sojourner adjustment scales and lower scores on the positive sojourner adjustment scales.	Simple Regression Analyses
	Pre-departure CCAPS-34 Distress Index scores that fall in the low range (score that falls below the 34th percentile) will predict higher sojourner adjustment as demonstrated by higher scores on the positive sojourner adjustment scales and lower scores on the negative sojourner adjustment scales.	

Power Analysis

An a-priori power analysis was conducted in an attempt to determine an adequate sample size for sufficient power. Determining an efficient sample size, however, is not a simple task (Lenth, 2001). Yet, it is essential to do to avoid having an underpowered study and to minimize the chances of having Type II statistical errors (Aguinis, 1995; Kelley & Maxwell, 2003). Cohen (1988) suggested guidelines for small, medium, and large effect sizes with R^2 equal to .02, .13, or .26, respectively. Lenth (2001) cautioned against relying solely on standardized effect sizes.

Tabachnick and Fidell (2013) provided a formula for calculating sample size for a multiple regression analysis ($N \geq 50 + 8m$, with m equaling the number of independent variables). This formula assumes a medium-size relationship between the independent variables and the dependent variable with $\alpha = .05$. With 12 predictor variables in the regression, the sample size needed to be at least 146 to have adequate power. The final sample of 157 participants was sufficient to achieve this power.

Procedures

For this study, convenience sampling was utilized, and participants were recruited through the Studies Abroad office at a large, private university in the Northeastern United States with 844 students participating in a Spring 2015 program. A list serve was created by the Study Abroad office, which included email addresses for the 844 participants. The researcher was provided access to this list serve address, but was not provided the names or email addresses of participants on the list in order to ensure participant anonymity. Participants received an email in Fall 2014, approximately eight weeks prior to their departure (Appendix A). The email briefly explained the present research study and informed participants that they would be offered the

opportunity to enter into a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25) as incentive for their participation. The email included a link for the pre-departure survey. A flyer was also created and placed in the Study Abroad office soliciting participation for this study (Appendix B).

The survey was completed through Qualtrics, a web-based survey platform, which is commonly used for University-level research. Once students linked to the survey, an IRB-approved informed consent form explained their rights as research participants. Participants were required to click on *I agree* to indicate that they were age 18 or over, and *I agree* to demonstrate that they were willing to participate in the study (Appendix C). After the initial email was sent to students, three email reminders were sent. The first reminder was sent one week after the first email was sent, the second reminder was sent two weeks after the first reminder, and the third reminder was sent two weeks after the second reminder.

At midpoint of Spring Semester 2015 (approximately week seven), all participants received an email with a link to the second survey (Appendix D). In order to ensure participant confidentiality and to target only those who had completed the first survey, the original plan was to send the email about the follow-up survey through Qualtrics. This was not possible, however, due to the time lapse between surveys. Qualtrics only allows an email to be generated directly to a survey participant if the follow-up survey is sent within a month of the first survey. So that that participant confidentiality was not compromised, the email for request for participation in the second survey was sent to the list serve inviting all participants who completed the pre-departure survey to complete the second survey. In order for the researcher to be able to link the participant responses to pre-departure survey results while maintaining their confidentiality, participants were required to enter a code that they had created at the time of the first survey. The code

consisted of the first letter of a participant's first name, the last letter of a participant's last name plus the last four digits of a participant's phone number.

For the follow-up survey, participants were again required to provide consent for their participation in the study by clicking *I agree* on the IRB-approved informed consent form (Appendix E). Students were provided another opportunity to enter into the drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). One week later, participants received a reminder email. A second email reminder was sent one week after the first reminder. A third, and final, email reminder was sent at the beginning of the tenth week informing students that the survey would close several days later on March, 27, 2015.

Qualtrics' servers are protected by high-end firewall systems, and vulnerability scans are performed regularly (http://www.qualtrics.com/security-statement/). Additionally, Qualtrics utilizes Transport Layer Security (TLS) encryption (also known as HTTPS) for all transmitted data. Surveys are protected with passwords and HTTP referrer checking. Data were then uploaded to SPSS, a software package used to conduct statistical analysis. The computer used for analysis is password protected and was kept in a locked office at all times.

In terms of missing data, there are several methods available to deal with missing data, but no clear guide exists in determining the best option (Johnson & Young, 2011). When the amount of missing data is small, 5% or less, traditional methods such as mean substitution can yield sound estimates without the complexity introduced by more modern approaches (Johnson & Young, 2011; Tabachnick & Fidell, 2013). For the first survey, surveys with three or more unanswered items were regarded as incomplete and were removed from the analyses. For the second survey, surveys with six or more unanswered questions were regarded as incomplete and

were removed. Because a sufficient sample size was obtained after removing incomplete surveys (N = 157), and because so few items were left incomplete, mean substitution was not used in calculating the results.

Participants

Research participants for this study were comprised of undergraduate college students, ages 18 and over, who participated in a study abroad program during the 2015 Spring Semester. While the majority of the students who participated in the study were students at the host university, some of the participants were students at other universities who were attending a program offered by the host university. This university has study abroad sites in Beijing, China; Florence, Italy; Hong Kong, China; Istanbul, Turkey; London, England; Madrid, Spain; Santiago, Chile; Strasbourg, France; and Wroclaw, Poland. Students from the host university also participated in World-partner programs in a number of other locations. Through these programs, a wide range of academic courses is offered, although offerings vary depending on the site of the program.

Pre-Departure Survey Sample Data. Of the 844 students who received the request for participation for this study, 243 completed surveys with fewer than three items missing, yielding a response rate of 28.79%. Survey One sample was comprised of 174 females (71.6%), 67 males (27.6%), 1 transgender (.4%), and 1 individual who identified as "other" (.4%). The majority of the participants were white (60.9%); 14% were Asian/Asian-American; 7% were Hispanic or Latino/a; 16.2% were Black/African-American; 1.2% were American Indian; 8.2% were Multi-racial; 2% identified as "other", and one participant did not respond. Most participants (90.5%) identified as Heterosexual/Straight, 2.9% identified as Gay or Lesbian,

5.8% identified as Bi-sexual, and .8% identified as Fluid. Participants ranged from 18 to 24 years of age, and the majority of students (138 or 56.8%) were 20 years old. Five students (2.1%) were 18 years of age; 32 (13.2%) were 19; 53 (21.8%) were 21; 7 (2.9%) were 22; one (.4%) was 23; one (.4%) was 24; and six (2.5%) participants did report their age. The majority of participants in Survey One (197 or 81.1%) indicated that they were Juniors, 2 (.8%) were Freshmen, 31 (12.8%) were Sophomores, ten (4.1%) were Seniors, 2 (.8%) indicated "Other," and 1 (.4%) did not respond to this item. Most participants (86.4%) were students at the home institution. Fifty-nine students (24.3%) were planning to study abroad in Florence, 51 (21%) were planning to attend the London program, 48 (19.8%) were participating in the Madrid program, and 20 (8.2%) were participating in the Strasbourg program. Several students did not specify the program in which they would be participating. Other students were planning to participate in a range of other programs internationally. Respondents indicated that they were enrolled in a vast assortment of academic majors. Over 90% of the participants had self-reported grade point averages of 3.0 or higher. One hundred eleven (45.7%) had grade point averages of 3.0 to 3.4, and 110 students (45.1%) had grade point averages of 3.5 or higher. One hundred participants (41.2%) were members of sororities or fraternities, and 142 (58.4%) were not. Seventeen individuals (7%) indicated that they were members of an athletic team, whereas the majority (91.8%) was not.

Final Sample Data. Two hundred thirty participants began Survey Two, and of these surveys, 200 were complete. However, forty-three surveys were omitted from the final analyses because they could not be linked to a Pre-Abroad Survey with the code provided by the participant. This left a final sample of 157 participants, yielding an overall response rate of 18.6% for both surveys. Sixty-five percent of the participants who completed Survey One also completed Survey Two. The final sample consisted of 71.3% females, and 27.4% males. One

participant identified as transgender, and one identified as "other." Sixty-one percent (61.1%) identified as White/Caucasian; 10.9% Asian/Asian-American; 9.5% Multi-Racial; 8.3% Black/African-American; 7% Hispanic/Latino/a; 1.2% Native American/American Indian; and 1.8% identified as "other."

The majority of the participants (88.5%) identified as Heterosexual/Straight. Seven percent identified as Bi-sexual, 3.8% identified as Gay/Lesbian, and .6% identified as Fluid. Participants ranged in age from 18 to 24. Most participants (83%) were under the age of 21 at the time of completing the Pre-departure survey. Over half of the participants (54.4%) indicated that they were 20 years of age, 22.2% were 21 years old, 15.9% were 19, 1.9% were 22, 1.3% were 18, and .6% were 24.

Eighty-six percent of the participants indicated that the large, private university in the Northeastern United States was their home institution. The other participants attended one of sixteen other institutions. Twenty-six percent (26.1%) of the students who completed both surveys were participating in the Florence program, 21% were participating in the London program, 17.8% in the Madrid program, 10.2% in the Strasbourg program, 5.1% in the Hong Kong, and 3.8% in the Istanbul program. Other students participated in a range of programs. Participants in the programs indicated that they were majoring in a wide range of academic majors. Almost 50% (49.7%) of the participants had GPAs of 3.5 or higher. Forty-two percent had GPAs falling between a 3.0 and a 3.4. Fewer than 8% (7.6%) of the students had grade point averages below a 3.0. Thirty-eight percent (38.2%) of the participants were members of a sorority or fraternity, and only a minority of the participants (7.6%) were members of an athletic team.

Instrumentation

Pre-departure Survey. For the pre-departure survey, participants completed the Daily Drinking Questionnaire (DDQ; Collins et al., 1985) and the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke, et al., 2012). Demographic information was also collected at this time.

Daily Drinking Questionnaire (DDQ; Collins et al., 1985). The DDQ is a calendar-based, self-report measure of alcohol use (Correia, Murphy, & Barnett, 2012) (See Appendix F).

When completing the DDQ, participants reported the frequency of their use and number of drinks they consumed on each day of a typical week in a month. From this measure two composite scores were derived: the average number of drinking days per week and average drinks per drinking day.

The DDQ is a shorter version of the Drinking Practices Questionnaire (DPQ), which was developed to measure volume, quantity, and frequency of alcohol consumption (Cahalan, Cisin, & Crossley, 1969). Collins, Parks, and Marlatt (1985) found that the DDQ was significantly correlated with the DPQ (r = .50, p = .001). The DDQ has been used in numerous studies with college students (e.g., Dennhardt & Murphy, 2011; Ebersole et al., 2012; LaBrie et al., 2010; Neal, Corbin, & Fromme, 2006; Pedersen et al., 2010b; 2012; 2014; Walker & Cosden, 2007).

In a study conducted by Pedersen et al. (2011b), typical student drinking in the first and last months abroad was highly correlated (r = .77). However, Walker and Cosden (2007) noted that there is often poor reliability with alcohol self-report data, particularly in cases where students are embarrassed by their use or fear that honestly reporting their use will result in

negative consequences. Unfortunately, collecting this type of information often relies on self-report data.

The Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke et al., 2012). The CCAPS-34 is a multidimensional instrument intended to assess mental health distress in the college student population (Lockard, Hayes, Graceffo, & Locke, 2013; Locke et al., 2012). The CCAPS-34 contains 34 items and 7 subscales including Depression, Generalized Anxiety, Social Anxiety, Academic Distress, Eating Concerns, Hostility, and Alcohol Use. Each item is rated from "0" = not at all like me to "4" = extremely like me (Appendix G). Sample items include: "I am anxious that I might have a panic attack in public," "I feel sad all the time," and "I am unable to keep up with my schoolwork."

In order to score the CCAPS-34, appropriate items were first reversed (item 8, and item 19). The items from each subscale were then added and the mean was calculated to create the subscale raw score. Raw scores can be used to look up percentiles in the *CCAPS 2012 Technical Manual* (Center for Collegiate Mental Health, 2012). For each subscale on the CCAPS-34, there are points that can be used as interpretive thresholds, or cut-offs, to simplify interpretation of the scores. These cut-offs divide scores into three ranges: Low, Mild, and Elevated, indicating varying levels of severity and risk (Center for Collegiate Mental Health, 2012). The higher cut points for each subscale help to identify areas in which an individual's distress is likely to be more problematic. A higher cut point does not necessarily indicate the presences of a mental health condition. Rather, it indicates a likelihood of a clinical problem in that specific subscale area. The elevated cut points for the subscales on the CCAPS-34 are indicated in terms of percentiles: 76^{th} percentile for social anxiety; 65^{th} percentile for generalized anxiety; 74^{th} percentile for eating concerns; 74^{th} percentile for alcohol use; 59^{th} percentile for depression; 70^{th}

percentile for academic distress; and 70th percentile for hostility.

The CCAPS-34 also includes a Distress Index to track a client's distress. It is calculated by computing the mean of 20 items on the CCAPS-34 (items 2, 3, 5, 7 9, 10, 11, 12, 15, 17, 20, 21, 22, 23, 25, 26, 28, 29, 30, and 33) (Center for Collegiate Mental Health, 2012). The Distress Index also has two cut scores that divide it into three ranges. The elevated cut point for the Distress Index is at the 70th percentile.

The CCAPS-34 is a shorter version of the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62; Locke et al., 2011), and was designed because there was a need for a briefer instrument to assess some of the common symptoms of psychological distress in college students (Locke et al., 2012). While numerous measures of mental health exist, many are expensive to administer, score, and interpret (Locke et al., 2011). Further, most of the measures that previously existed were created for the general adult clinical population, and those that were created for use with college students were normed with relatively small samples in only one institution, contributing to reliability and validity issues for the instruments (Locke et al., 2011). The CCAPS-62 was designed for and normed on college students and was created based on research gathered from 22,060 participants from over 135 college counseling centers nationwide (Locke et al., 2011).

Utilizing three studies, the CCAPS-34 was developed. In the first study, Locke and colleagues (2012) utilized data gathered from a sample of 19,082 individuals from 52 college counseling centers nationwide. They conducted item analyses for each factor of the CCAPS-62 and then highlighted items they deemed best performing for each subscale. These items were then reviewed by a committee of content experts, senior staff clinicians, and psychotherapy

researchers to determine the sets of items that best represented the latent factors being studied and provided clinical utility (Locke et al., 2012). They decided to remove the Family Distress subscale of the CCAPS-62 and rename the Substance Use subscale Alcohol Use. Through this process, they created the final short form of the CCAPS-34.

Next, Locke et al. (2012) conducted a study with 482 undergraduate students to test the proposed factor structure of the CCAPS-34. Using a confirmatory factor analysis, they found that CCAPS-34 conformed well to the factor structure proposed during its development. Additionally, they found that each subscale of the CCAPS-34 strongly correlated to a longer, and established measure of the same construct, providing evidence of convergent validity. Correlations ranged from r = .520 (for Eating Concerns with the Eat-26 total score) to r = .777 (Alcohol Use with the AUDIT) (Locke et al., 2012).

The final study conducted by Locke et al. (2012) in the development of the CCAPS-34 was to examine test-retest scores in a sample of 155 nonclinical undergraduate students over one and two-week intervals. The coefficients ranged from r = .792 (Alcohol Use) to r = .866 (Depression) for the one-week test-retest group. The coefficients for the two-week test-retest group ranged from r = .742 (Academic Distress) to r = .864 (Depression). These results offered initial evidence for stability of the CCAPS-34 subscales in a sample of nonclinical college students. According to Locke et al. (2012), Academic Distress and Alcohol Use scores may be more likely to be influenced by time-sensitive events in the lives of college students, and therefore may be more likely to fluctuate for some students.

The Distress Index includes items from several different subscales of the CCAPS-34, and augments the CCAPS subscales by providing a quick assessment of a client's general

psychological distress. The Center for Collegiate Mental Health (2012) included this form of total score in response to requests for a score that would point to overall distress. However, the Center for Collegiate Mental Health (2012) emphasizes the importance of not using the Distress Index as a replacement for a close examination of the subscales. The CCAPS-34 identifies several key items for review by professionals using the assessment. The three items include: "I have thoughts of ending my life;" "I am afraid I may lose control and act violently;" and "I have thoughts of hurting of others."

The Distress Index was created by using a bifactor model as the basis. It is identical for the CCAPS-62 and CCAPS-34 items and can therefore be compared between the two.

There are limitations to the CCAPS-34 that are noteworthy (Locke et al., 2012). While it does assess a wide range of issues faced by college students, it is not meant to assess all potential areas of concern. Further, it is solely a self-report measure, and does not incorporate observer or behavioral ratings. Due to these limitations, it is important to recognize that the CCAPS-34 provides one source of information, and it critical that it is not the only data point used in assessing student mental health.

Demographics Questionnaire. A demographics questionnaire designed for this study was used to collect information about participants in order to compile descriptive statistics (Appendix H). The questionnaire included items about age, gender, ethnicity, sexual orientation, class standing, academic major, cumulative grade point average, Greek affiliation, affiliation with an athletic team, home institution, and study abroad location.

Abroad Survey (Second Survey). Students were contacted via the listserv at midpoint of the Spring 2015 semester inviting those who had completed the first survey to complete the

second survey. The email included a link to the Qualtrics online survey. For this survey, students again completed the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985) and the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34). Additionally, they completed the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011a) (Appendix I), the Drinking Motives Questionnaire-Revised (Cooper, 1994) (Appendix J), and a modified version of the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989; modifications: Pedersen et al., 2102) (Appendix K).

Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b). The Sojourner Adjustment Measure includes 24 items and has six factors including: Social Interaction with Host Nationals, Cultural Understanding and Participation, Language Development and Use, Host Culture Identification, Social Interaction with Co-nationals, and Homesickness/Feeling out of Place. Each item is rated from "1" = strongly disagree to "7" = strongly agree. Sample items include: "spent a good amount of time meeting and conversing with local people," "felt anxious or nervous about being far from home," and "socialized a good deal with other Americans." In order to score the SAM, the mean score for each of the six subscales was calculated.

The Sojourner Adjustment Measure was developed to fulfill the need for a brief, multi-component measure of Sojourner Adjustment that could be used in work with populations residing temporarily in foreign environments (Pedersen et al., 2011b). Prior to the development of the SAM, a measure of this nature did not exist. Based on the literature, Pedersen et al. (2011b) hypothesized six Sojourner Adjustment factors. Using a sample of 248 college students from one university who had just returned from studying abroad, they asked participants to complete a 50-item assessment.

While sojourner adjustment and acculturation are unique constructs, they are conceptually similar. Therefore, Pedersen et al. (2011b) assessed the convergent validity of the SAM with two established measures of acculturation, the Vancouver Index of Acculturation (VIA; Ryder et al., 2000), and a modified version of the Acculturation, Habits, and Interests Multicultural Scale for Adolescents (AHIMSA; Unger et al., 2002). The preliminary analyses demonstrated evidence of convergent validity with measures of acculturation. The four positive SAM factors were positively and significantly ($p < .05$) associated with the host culture identification dimension of the VIA. Homesickness/Feeling out of Place showed a significant inverse relationship ($r = -0.27$, $p < .05$) with this dimension. Social Interaction with Co-Nationals was positively and significantly correlated ($r = .35$, $p < .05$) with the home culture identification dimension of the VIA.

For the AHIMSA (Unger et al., 2002), the four positive Sojourner Adjustment factors were significantly ($p < .05$) negatively correlated with Separation subscale, and they were positively correlated ($p < .05$) with the Integration subscale. The two negative Sojourner Adjustment factors were also significantly correlated ($p < .05$) with the Separation subscale, and they were significantly negatively correlated ($p < .05$) with the Assimilation subscale.

Pedersen et al. (2011b) also conducted exploratory and confirmatory factor analyses and found support for their model. Further, they found that all subscales of the SAM had adequate internal reliability. The alphas for each subscale were: ($\alpha = .90$) for Social Interaction with Host Nationals; ($\alpha = .84$) for Cultural Understanding and participation; ($\alpha = .86$) for Language Development and Use; ($\alpha = .67$) for Host Culture Identification; ($\alpha = .85$) for Social Interaction with Co-Nationals; and ($\alpha = .70$) for Homesickness/Feeling out of Place. One limitation of this measure, to date, is that it has been normed with only one group of students at one university.

Drinking Motives Questionnaire-Revised (Cooper, 1994). The 20-item Drinking Motives Questionnaire-Revised includes four subscales to assess coping motives, social motives, conformity motives, and enhancement motives for drinking. Each subscale consists of 5 items that are rated "1" = almost never/never, "2" = some of the time, "3" = half of the time, "4" = most of the time, and "5" = almost always/always. Sample items include: "I drink to forget my worries," "I drink because it's fun," and "I drink so I won't feel left out." Responses were totaled and then averaged for each subscale to create a score for each subscale.

Using a sample of 1,243 adolescents (M = 17.3 years of age), Cooper (1994) examined the extent to the which four drinking motives conceptualized by Cox and Klinger (1988) (Coping Motives, Social Motives, Conformity Motives, and Enhancement Motives) constitute empirically distinct factors and are associated with unique drinking patterns and consequences. Data were collected through face-to-face interviews that lasted approximately two hours, and were conducted by 30 professionally trained interviewers. Five items were used to measure each of the four drinking motives, and other measures were also used to assess alcohol use and abuse and typical drinking contexts.

Confirmatory factor analyses were conducted to test a one-factor, two-factor, three-factor and the four-factor models. The four-factor model fit the data significantly better than any of the other models. Additionally, Cooper (1994) found that each drinking motive was associated with a distinctive pattern of antecedents and alcohol-related consequences.

Martens et al. (2008) conducted a study with a sample of 441 college students to examine the reliability and validity of the four-factor Drinking Motives Measure, and they found internal consistency estimates ranging from (α = .81) for conformity motives to (α = .87) for

Social Motives. Pedersen et al. (2012) reported reliability statistics of (α = .76) for Coping Motives; (α = .91) for Social Motives; (α = .84) for Conformity Motives; and (α = .89) for Enhancement Motives.

The fact that the Drinking Motives Measure was normed with a group of adolescents who are younger than most college students (*M* = 17.3 years of age) could be considered a limitation. However, Martens et al. (2008) tested the model with college students (*M* = 19.82 years of age) and found a good model fit for the four-factor solution. The self-report format of the Drinking Motives Measure can also be considered a limitation.

Rutgers Alcohol Problem Index modified (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012). The Rutgers Alcohol Problem Index is the second most published instrument on alcohol-related problems in the literature on college drinking (Devos-Comby & Lange, 2008). Pedersen et al. (2012) modified several items from the RAPI to reflect situations that are specific to the study-abroad context, and items were added based on discussions with American study-abroad students. The modified version consists of 39 items. Sample items include: "became emotionally homesick after I had been drinking," "injured myself," and "lost an important item (such as cell phone, keys, wallet, passport)." Participants indicated whether they experienced each of 39 consequences (1 = yes, 0 = no). A sum of consequences was then computed for a total score.

The RAPI, in its original form, is a 23-item self-report measure that was developed to assess a range of psychosocial consequences experienced by adolescents/young adults over the course of the past year (Kahler, Strong, & Read, 2005). However, the RAPI can be used to examine lifetime experience of alcohol-related consequences or consequences for a defined time

range (Devos-Comby & Lange, 2008). While items on the RAPI are usually rated on a 5-point Likert scale ranging from 0 (Never) to 4 (> 10 times), Pedersen et al. (2012) altered the format to a yes/no response due to the fact that students were generally abroad for a brief period of time, and as a result did not have as much time to experience consequences to the levels indicated on the Likert scale normally used with the RAPI (E. Pedersen, personal communication, September 4, 2014). Kahler et al. (2005) also scored the measure using a dichotomous scoring of items.

In creating the RAPI, White and Labouvie (1989) conducted a study with a total sample of 1,308 adolescents ranging in ages from 12 to 21. Based on the literature, a list of 53 problems associated with alcohol use was compiled, and participants were asked to indicate how many times they had experienced each consequence using categories on a 5-point Likert scale. The participants were also asked questions about their frequency of use for beer, wine, and liquor, and the typical quantities they drank. From these responses, White and Labouvie (1989) completed principle component analyses which resulted in a three-factor solution with 23-items.

Internal consistency estimates have ranged from .85 to .95 in studies that have used the RAPI (Carey & Correia, 1997; Devos-Comby & Lange, 2008; Levy & Earleywine, 2003). In a study conducted by Kahler et al., (2005), they reported an α coefficient of .86 when they used a dichotomous scoring of items. Pedersen et al., (2012) reported a Cronbach's alpha of .87 for the modified version of the measure.

The literature cites numerous criticisms of the RAPI (Devos-Comby & Lange, 2008; Earleywine, LaBrie, & Pedersen, 2008; Kahler et al., 2005; Neal et al., 2006). One primary limitation is that the validity of the RAPI used with college students has received little attention (Devos-Comby & Lange, 2008; Neal et al., 2006). Neal et al. (2006) conducted a longitudinal

study with 895 participants in order to provide further validation for the RAPI. They found that several of the items (missed out on other things because you spent too much money on alcohol, and had a bad time) performed much differently between men and women. They suggested that other measures of drinking related consequences may be more sensitive to minor alcohol-related consequences than the RAPI. Earleywine et al. (2008) also addressed the topic of potential sex bias in the RAPI. They proposed a shorter scale that would eliminate sex bias. Despite these criticisms, this study will utilize the scale proposed by Pedersen et al., (2012) in order to more easily make comparisons to former studies from the results of this study.

Data Analysis

Pre-Analysis. Because it was likely there would be high correlations among independent variables in this study, the continuous predictor variables were centered before setting up the regression analyses as recommended by Frazer et al. (2004). Centering, also referred to as standardizing, is the process of putting the variables into deviation units by subtracting their sample means to produce revised sample means of zero (Frazier et al., 2004) The process of centering helps to decrease problems that are associated with multicollinearity (Frazier, 2004). Additionally, Variance Inflation Factor (VIF) and tolerance diagnostics were run to assess for multicollinearity, and no issues were identified.

Analyses. A multiple regression analysis of a Poisson process was the statistical procedure used to answer this study's first three research questions: *How does mental health impact alcohol-related consequences for college students studying abroad?; How does sojourner adjustment impact alcohol-related consequences for college students studying abroad?;* and *How do drinking motives impact alcohol-related consequences for college students studying*

abroad?

Multiple regression is a multivariate correlational research design, and a primary goal of conducting regression analysis is to make inferences about the relative importance of predictor variables (Nimon & Oswald, 2013). For outcome variables that are measured in terms of counts, utilizing Poisson regression techniques can provide superior results in terms of sample size and power (Signorini, 1991). This method has been used in other studies that have examined factors influencing alcohol-related consequences for college students abroad (Hummer et al., 2010; Pedersen et al., 2012) because alcohol-related consequences is a count variable which can result in skewed distributions when the overall mean of the variable is low.

For the analysis, drinks per week while abroad was entered as a covariate in Step One, as was done in the study conducted by Pedersen and colleagues (2012). If the sample size had been large enough to do so, the location of program was going to be entered as a covariate. Given that students were in a wide variety of study abroad locations, this was not done. Because research suggests that there is a high correlation between psychological distress and alcohol-related consequences, the Distress Index score from the CCAPS-34 was entered in Step Two.

The remaining steps of the Poisson multiple regression analysis replicated Pedersen et al.'s (2012) methodology. In Step Three, the positive sojourner adjustment factors (social interaction with host nationals, cultural understanding and participation, language development and use, and host culture identification) were entered. Step Four included the negative sojourner adjustment factors (Social Interaction with Co-Nationals, and Homesickness/Feeling out of Place). Finally, drinking motives (Coping, Social, Conformity, and Enhancement) were entered in Step Five. In the current study, interactions between SAM factors and Drinking Motives were

not tested as Pedersen et al. (2012) did because this would have required a much larger sample size. Further, in order to replicate the design Pedersen and colleagues (2012) utilized in their study, the decision was made not to include any other demographic factors in the analysis such as gender and ethnicity.

In order to answer the fourth research question (*how does mental health change for college students while they are abroad?*) paired samples t-tests were run on each of the CCAPS-34 scales to calculate the changes in pre-abroad mental health and abroad mental health. To determine if pre-departure mental health predicted sojourner adjustment (Research Question 5), a simple regression was run. Finally, post-hoc analyses were conducted to further explore significant findings.

Chapter IV: Results

Once the data were collected, they were screened according to the procedures highlighted in the previous chapter. Chapter IV details the results of the analyses conducted to answer this study's research questions, as outlined in Chapter I. First, descriptive statistics will be provided for the final sample (N = 157). The first group of statistics describes the drinking status and mental health status of students prior to their study-abroad experience. The second group of statistics reports the status of students during their study-abroad experience and includes frequency of drinking, mental health status, sojourner adjustment, drinking motives, and drinking related consequences. Data corresponding to descriptive statistics can be found in Appendix L.

Following the presentation of descriptive statistics, the results from a multiple regression analysis of a Poisson process will be reported to answer Research Questions 1, 2, and 3. The results of a t-test conducted in order to answer Research Question 4 will then be provided, followed by the results of a simple regression to answer Research Question 5. Finally, the results of post-hoc analyses will be presented. Statistical analyses for this study were conducted using SPSS version 22.0.

Descriptive Statistics Regarding Pre-departure

The pre-departure survey included the Daily Drinking Questionnaire (DDQ; Collins et al., 1985) and the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke, et al., 2012). Additionally, it included a demographic survey, for which results are detailed in Chapter 3. This section provides descriptive statistics for participants (N = 157) related to drinking and mental health prior to going abroad.

Pre-Departure Drinking. In order to examine pre-departure drinking for participants, the Daily Drinking Questionnaire (DDQ; Collins et al., 1985) was used. Table L.1 in Appendix L provides pre-departure weekly drinking descriptive statistics for participants. It also categorizes weekly drinking by gender and age and provides respective statistics for these classifications. The mean number of alcoholic drinks per week consumed by participants prior to going abroad was 9.87 drinks (*SD* = 11.19). Males consumed an average of 13.86 drinks per week (*SD* = 14.46); females consumed an average of 8.39 drinks per week (*SD* = 9.39); the transgender participant consumed an average of three drinks per week; and, the participant who identified as "Other" consumed an average of 11 drinks per week. Table L.2 provides an overview of participant pre-departure weekly drinking by number of drinks consumed. Twenty-four students (15.3%) indicated that they did not drink at all in a typical week. Approximately one-third (36.9%) of the participants reported drinking between 1 and 7 drinks in a typical week, and approximately one-fourth (26.8%) of the participants indicated they drank between 8-14 drinks in a typical week. Ten percent (10.8%) drank between 15-21 drinks per week, and 10.2% reported drinking over twenty-two drinks per week.

Figure 1 (Appendix L, page 161) provides frequencies for the number of weekly drinks consumed by participants prior to going abroad. The mode for number of weekly drinks consumed was 0, and the median was 7 (Table L.1). At pre-departure, the mean number of drinks consumed per week by participants who were under the age of 21 was 9.89 drinks (*SD* = 11.57), and the mean number of drinks consumed by participants who were 21 or over was 9.82 (*SD* = 10.31). The most a participant reported drinking in a week was 64 drinks, and this was by a male participant who was under the age of 21 at pre-departure. The highest number of drinks consumed per week reported by a participant who was 21 or over at pre-departure was 46. The

highest number of weekly drinks consumed by a female was 61. The most the transgender student reported drinking in a week was 3 drinks, and the student who identified as "other" reported drinking a maximum of 11 drinks in a week prior to going abroad (Table L.1).

Table L.3 provides an overview of participant drinking at pre-departure by day of the week. The results from the Daily Drinking Questionnaire (DDQ; Collins, Parks, and Marlatt, 1985) taken by participants prior to going abroad also indicated that participants drank the heaviest on Thursdays (M = 2.04, SD = 3.29), Fridays (M = 3.16, SD = 3.42), and Saturdays (M = 3.55, SD = 3.55). Table L.4 highlights participant pre-departure drinking by gender, and Table L.5 shows participant pre-departure drinking by age. The highest number of drinks consumed by a participant in an evening was 20, and this was by a female student who was under the age of 21.

Pre-Departure Mental Health. To assess the mental health of participants prior to departure, they completed the CCAPS-34 (Locke et al., 2012). The means for each item on the CCAPS-34 taken by participants at pre-departure are reported in Table L.6. The CCAPS-34 scores for participants are categorized by cut scores in Table L.7. As discussed in Chapter III, these cut-offs divide scores into three ranges: Low, Mild, and Elevated, indicating varying levels of severity and risk (Center for Collegiate Mental Health, 2012). Results from the CCAPS indicated that prior to going abroad, 36.3% of the participants had elevated scores for alcohol use, and 30.6% had elevated scores for eating concerns. These two scales had the highest number of participants with elevated cut scores. Approximately 15% of participants had elevated scores for social anxiety, and 10.2% had elevated scores for academic distress. Fewer than 10% of participants had elevated scores for the other scales, with 8.9% having elevated scores for hostility, 8.3% having elevated scores for generalized anxiety, 7% having elevated scores for depression, and 4.5% having elevated scores on the distress index. Table L.8 presents the pre-

departure CCAPS-34 cut scores by gender. The percentage of males and females who had elevated cut scores for alcohol use was almost equivalent, with 37.2% of males and 35.7% of the female participants falling in this category. The participant who identified as "Other" also had an elevated cut score for alcohol use. All seven participants with elevated pre-departure distress index scores were females.

Table L.9 highlights the three critical CCAPS-34 items. For the CCAPS-34 item 25: *I have thoughts of ending my life,* two participants selected *"4, extremely like me."* For the CCAPS-34 item 29: *I am afraid I may lose control and act violently*, one participant selected "4, extremely like me," and two participants selected "3." Over 99% of the participants (99.4%) selected "0" or "1" on CCAPS-34 item 34" *I have thoughts of hurting others*. None one of the participants selected "4" for this item on the pre-departure survey.

The results from the pre-departure survey provide a snapshot of participant drinking and mental health prior to going abroad. While that data show that males drank more drinks per week on average than the female participants, the number of drinks consumed by the male participant who drank the most was not much higher than the number of drinks consumed by the female who drank the most. While almost one-third of the participants had elevated cut scores on the CCAPS-34 Eating Concerns scale, and slightly more than one-third of participants had elevated scores on the Alcohol Use scale, the majority of participants fell in the low cut range on the CCAPS-34 Depression, Social Anxiety, Academic Distress, Eating Concerns, Hostility, Alcohol Use, and Distress Index. For the Generalized Anxiety scale, the majority of participants fell in the mild range.

Descriptive Statistics for Students During Study Abroad

Participants were contacted at approximately week seven of the semester to complete the study abroad survey. They were given three weeks to complete the survey, which included the Daily Drinking Questionnaire (DDQ; Collins et al., 1985), the Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34: Locke, et al., 2012), the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b), the Drinking Motives Questionnaire-Revised (Cooper, 1994), and the Rutgers Alcohol Problem Index modified (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012). This section provides descriptive statistics for participants (N = 157) regarding each of these measures while studying abroad.

Study Abroad Drinking. For the study abroad survey, participants again completed the Daily Drinking Questionnaire (DDQ; Collins et al., 1985) to assess their alcohol consumption. Table L.10 provides study abroad weekly drinking descriptive statistics for participants. It also categorizes study abroad weekly drinking by gender and age and provides respective statistics for these categories. The mean number of alcoholic drinks per week consumed by students while they were abroad was 11.27 (SD = 11.30). Males drank an average of 15.20 (SD = 11.30) drinks per week while abroad, females drank an average of 9.89 (SD = 9.44) drinks per week, the transgender participant drank an average of 2 drinks per week, and the participant who identified as "Other" drank an average of 7 drinks per week. Participants under the age of 21 prior to going abroad drank an average of 11.38 (SD = 11.37) drinks per week while abroad. Participants who were 21 years of age or older prior to going abroad drank an average of 10.98 (SD = 11.25) drinks per week while abroad. Table L.11 provides an overview of participant study abroad weekly drinking by number of drinks consumed. While abroad, 10.2% of the students reported that they did not drink at all during a typical week. This is a decrease from the 15.3% who

reported that they did not drink at all prior to going abroad. Over one-third of the participants (36.9%) reported drinking 1 to 7 drinks weekly while abroad, and another 26.1% indicated they drank 8 to 14 drinks in a typical week. These percentages are consistent with those reported by participants for these categories in the Pre-departure survey (Table L.2). Twelve percent (12.7%) indicated they drank 15-21 drinks weekly while abroad, and 14% reported drinking over 21 drinks per week. The highest number of drinks consumed in a typical week while abroad was 60, and this was by a male participant who was 21 years of age or older at pre-departure. This was slightly lower than the highest number of drinks consumed by a male at pre-departure (Table L.1). The highest number of drinks consumed in a week by a female student was 53. This was also lower than the highest number of drinks consumed by a female at pre-departure (Table L.1). Figure 2 (Appendix L, page 169) displays the frequencies for the total number of drinks per week consumed by participants in a typical week while abroad. The mode for number of weekly drinks consumed was 0, and the median was 8 (Table L.10).

Table L.12 provides an overview of participant drinking while abroad by day of the week. Thursdays (M = 2.05, SD = 2.58), Fridays (M = 3.20, SD = 2.78), and Saturdays (M = 3.17, SD = 2.94) were the heaviest drinking days for participants while abroad. The highest number of drinks consumed by a participant in a day was 14 drinks, and this was reported by a female student who was over the age of 21 at pre-departure (Table L.13, Table L.14).

Study Abroad Mental Health Status. Participants again completed the CCAPS-34 (Locke et al., 2012) on the abroad survey in order to assess their mental health. The means for each item of the CCAPS-34 taken by participants while abroad are reported in Table L.15. Table L.16 displays the means for each of the CCAPS-34 scales, which ranged from .6497 (Depression) to 1.68 (Social Anxiety). When comparing the CCAPS-34 cut scores from the pre-

departure survey with the study abroad survey, there was an increase in the number of participants who had elevated cut scores for all scales except Social Anxiety and the Distress Index (Table L.17). Almost half of all female participants (45.5%) had elevated scores for Eating Concerns for the abroad survey (Table L.18) compared to the 36.6% of females who had elevated scores for Eating Concerns at pre-departure. While abroad, almost 42 % of males (41.9%), and 36.6% of females had elevated scores for Alcohol Use, showing slight increases compared to the 37.2% of males and 35.7% of females who had elevated scores for Alcohol Use at pre-departure.

For the CCAPS-34 item 25: *I have thoughts of ending my life, one* participant selected *"4, extremely like me*" on the survey taken while abroad (Table L.19). For the CCAPS-34 item 29: *I am afraid I may lose control and act violently*, one participant selected "4, extremely like me," and two participants selected "3" (Table L.19). Over 97% of the participants (97.5%) selected "0" or "1" on CCAPS-34 item 34" *I have thoughts of hurting others* (Table L.19). Three participants selected "3" for this item, and none selected "4." According to these results, only a small percentage of participants indicated they were at risk for these markers of suicidal and homicidal ideation.

Study Abroad Sojourner Adjustment. To assess sojourner adjustment, participants completed the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b) on the study abroad survey. The measures of central tendency for each Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b) item are reported in Table L.20. Table L.21 reports means for each of the scales for SAM. The highest score a participant could have for a subscale was 7, and the lowest score was 1, with higher scores indicating that the person identified with the particular factor measured by the subscale. The mean for the SAM scales ranged from 3.87 (*SD* = 1.47) to 6.15

(*SD* = .78). For each of the subscales they were as follows: Social Interactions with Host Nationals (*M* = 4.72, *SD* = 1.43); Cultural Understanding and Participation (*M* = 6.15, *SD* = .78); Language Development and Use (*M* = 5.54, *SD* = 1.12); Host Culture Identification (*M* = 4.69, *SD* = 1.08); Social Interaction with Co-Nationals (*M* = 5.32, *SD* = 1.14); and Homesickness/Feeling Out of Place (*M* = 3.87, *SD* = 1.47); Mean scores for each of the SAM scales were similar for males and females (Table L.22).

Table L.23 highlights frequencies for the negative SAM Scale, *Interaction with Co-Nationals,* and Table L.24 highlights frequencies for the negative SAM Scale, *Homesickness/Feeling Out of Place.* Thirty-seven percent of participants had scores of six or higher for *Interaction with Co-Nationals, and* less than ten percent (9.5%) of participants had scores of six or higher on *Homesickness/Feeling Out of Place*.

Study Abroad Drinking Motives. Table L.25 displays means for items on the Drinking Motives Questionnaire-Revised (Cooper, 1994). Participants reported drinking for Social Motives (*M* = 2.97, *SD* = 1.09) and Enhancement Motives (*M* = 2.60, *SD* = 1.10) more than for Coping Motives (*M* = 1.59, *SD* = .63) or Conformity Motives (*M* = 1.34, *SD* = .56) (Table L.26). Males (*M* = 3.05, *SD* = 1.14) and females (*M* = 2.95, *SD* = 1.08) appeared to be equally motivated to drink for social reasons.

Study Abroad Alcohol-related Consequences. Table L.27 displays the frequencies for each item on the Rutgers Alcohol Problem Index modified (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012). Almost 60% of the participants (59.9%) reported having a hangover the day after drinking. Over half of the participants (54.8%) indicated they spent more money on alcohol than they had planned. Sixty percent (59.9%) reported that they ended up

drinking on days that they had not planned to drink. Over one-third of the students (34.4%) found themselves in a situation where they did not remember all or parts of the night, and 29.3% embarrassed themselves by saying or doing something they regretted. Twenty-five percent of the participants (27.4%) threw up during or after drinking, 24.8% felt guilty or bad about themselves as a result of drinking, and 24.8% reported having had difficulty making their way back home at the end of a night as a result of drinking. Over 20% of participants (21%) noticed that they needed more alcohol to feel the same effects, and 19.7% found they spent more time than they wanted on partying and drinking.

The total number of consequences experienced by participants is reported in Table L.28. The mean number of consequences experienced was 5.24 (*SD* = 5.05) (Table L.29). Males experienced an average of six consequences (*SD* = 5.62), and females experienced an average of five consequences (*SD* = 4.83). The transgender student experienced one consequence, and the student who identified as "Other" experienced three consequences. Approximately 15% of the participants did not experience any drinking related consequences. Thirty percent of participants (31.3%) experienced between one and three drinking related consequences. Another 21.7% experienced between four and six consequences, 14% experienced between seven and nine consequences, and 17% of the participants experienced ten or more consequences. The highest number of consequences experienced by a male participant was 21, and the highest number of consequences experienced by a female participant was 22. This female was under the age of 21 prior to going abroad.

Inferential Statistics

In summary, the results from the Daily Drinking Questionnaire indicated that students drank more while abroad. The results from the CCAPS-34 taken while students were abroad showed that scores on the Alcohol Use scale increased for students from pre-departure to study abroad. Over one-third of the participants had elevated scores on the Alcohol Use scale (37.6%) while abroad, and the increase in the number of males who fell in the elevated cut range (4.8%) from pre-departure to study abroad was greater than the increase in females who fell in this range (.9%). Despite these increases, however, the majority of students (45.2%) fell in the low cut range for Alcohol Use while abroad.

Distress did not increase for students while abroad. In fact, it remained relatively consistent with the majority of students (74.5%) falling into the low cut range on the Distress Index while abroad, compared to the 73.9% who fell in this category at pre-departure. The number of students who fell in the mild cut range for the Distress Index remained exactly the same at 21.7% from pre-departure to study abroad, and the number of students who fell in the elevated range on the Distress Index dropped slightly from pre-departure (4.5%) to study abroad (3.8%). Over one-third of the participants had elevated cut scores on the CCAPS-34 Eating Concerns scale (38.9%) and the majority of participants fell in the low cut range on the CCAPS-34 Depression, Social Anxiety, Academic Distress, Eating Concerns, Hostility, Alcohol Use, and Distress Index. On the Generalized Anxiety scale, the majority of participants fell in the mild cut range.

The results from the Sojourner Adjustment Measure showed the highest means for the subscales Cultural Understanding and Participation, Language Development and Use, and Social Interaction with Co-Nationals. While over one-third of the participants had high scores on the

negative SAM scale, Interaction with Co-Nationals, only 9.5% had high scores on the other negative SAM scale, Homesickness/Feeling Out of Place.

In terms of drinking motives, participants indicated that they were most likely to drink for Social Motives and Enhancement Motives, and least likely to drink for Coping Motives or Conformity Motives. The average number of drinking related consequences experienced by participants was five, and this was consistent for males and females, regardless of age at pre-departure. The most common drinking consequences experienced by participants were hangovers, drinking on days they did not plan to drink on, spending more money on alcohol than they intended to, and finding themselves in a situation where they did not remember all or parts of a night. Thirty-nine students reported that they had difficulty making their way back home at night after a night of drinking. Sixteen participants indicated that they found themselves in a dangerous situation they would not have been in had they been sober. Fifteen students were injured, and fifteen broke local laws after drinking. Eleven participants got into an argument or tense situation with another member of their study abroad group, and eight participants got into a fight, heated argument, or bad situation with a local. Seven reported they had unprotected sex, and five participants reported they were mugged, robbed, or assaulted after drinking alcohol.

Analyses to Answer Research Questions

Research Questions 1, 2, 3: Multiple Regression Analysis. A five-step hierarchical multiple regression analysis of a Poisson process was conducted to examine how mental health, sojourner adjustment, and drinking motives predicted alcohol-related consequences for the participants. The correlation matrix can be found in Table L.30 (Appendix L). In Step 1, the number of drinks per week while abroad (M = 11.27, SD = 11.30) was entered as the covariate;

in Step 2, the CCAPS-34 distress index (M = 0, SD = 1) was entered; in Step 3, the positive Sojourner Adjustment Measure scales (Interaction with Host Nationals (M = 0, SD = 1); Cultural Understanding and Participation (M = 0, SD = 1); Language Development and Use (M = 0, SD = 1); and Host Culture Identification (M = 0, SD = 1) were entered; in Step 4, the negative Sojourner Adjustment Measure scales (Social Interaction with Co-Nationals (M = 0, SD = 1); and Homesickness/Feeling Out of Place (M = 0, SD = 1) were entered; and in Step 5, the four scales from the Drinking Motives Questionnaire-Revised (Cooper, 1994) (Coping Motives (M = 0, SD = 1); Social Motives (M = 0, SD = 1); Conformity Motives (M = 0, SD = 1); and Enhancement Motives (M = 0, SD = 1) were entered. The coefficients, standard errors, Wald chi-square tests, and changes in log likelihood for the analysis are presented in Table 4.1.

Research Question 1: How does mental health impact alcohol-related consequences for college students studying abroad? In order to assess whether or not participant distress predicted alcohol-related consequences for participants, the CCAPS-34 Distress Index scores from the study abroad survey was added in Step 2. With drinks per week as the covariate, the model did not significantly predict consequences, log likelihood x^2 (1, N = 157) = .94, p = .332. That is, students who scored as having higher levels of mental health distress were not found to incur alcohol-related consequences at a level significantly different from those who had less mental health distress.

Research Question 2: How does sojourner adjustment impact alcohol-related consequences for college students studying abroad? In Step 3, the four positive SAM scales: Social Interaction with Host Nationals, Cultural Understanding and Participation, Language Development and Use, Host Culture Identification were entered in order to assess the impact that each of these scales had on alcohol-related consequences for participants. Social Interaction with

Host Nationals predicted consequences ($p < .05$), indicating that a 1-unit increase on this Sojourner Adjustment Measure scale predicted a 19% increase in alcohol-related consequences. Host Culture Identification predicted reduced alcohol-related consequences ($p < .05$), such that a 1-unit increase on this scale predicted an 18% decrease in consequences. Neither Cultural Understanding and Participation ($p = .41$) nor Language Development and Use ($p = .60$) significantly predicted consequences.

The overall model in Step 3, which also incorporated the number of drinks per week while abroad as the covariate and the CCAPS-34 distress index, significantly predicted alcohol-related consequences, log likelihood x^2 (4, $N = 157$) = 28.46, $p < .01$. The number of drinks per week predicted alcohol-related consequences ($p < .001$), such that a 1-unit increase in drinks per week while abroad predicted 4% more consequences while abroad. The CCAPS-34 Distress Index did not independently predict consequences ($p = .551$).

In Step 4, the two negative SAM factors: Social Interaction with Co-Nationals, and Homesickness/Feeling out of Place were entered. Neither of these scales significantly impacted alcohol-related consequences. The overall model used in Step 4, which included drinks per week as the covariate, the CCAPS Distress Index, the four positive SAM factors, and the two negative SAM factors did not significantly predict alcohol-related consequences, log likelihood x^2 (2, $N = 157$), $p = .064$. However, several factors in the model independently predicted consequences. The number of drinks per week ($p < .001$) and Social Interaction with Host Nationals continued to significantly predict consequences ($p < .05$), and Host Culture Identification predicted reduced alcohol-related consequences ($p < .05$).

Research Question 3: How do drinking motives impact alcohol-related consequences for college students studying abroad? To assess the impact that Coping, Social, Conformity, and Enhancement Drinking Motives had on alcohol-related consequences, the four drinking motives were added in Step 5. In terms of Drinking Motives, Social Motives were a significant predictor for increased alcohol-related consequences ($p < .001$), indicating that a 1-unit increase in the Social Motives scale resulted in a 52% increase in consequences. Coping Motives ($p = .89$), Conformity Motives ($p = .31$), and Enhancement Motives ($p = .91$) were not significant predictors for alcohol-related consequences.

The overall model in Step 5, which included drinks per week while abroad, the CCAPS-34 Distress Index, the positive and negative Sojourner Adjustment Measure scales, and Drinking Motives scales significantly predicted alcohol-related consequences for the participants, log likelihood x^2 (4, $N = 157$) = 101, $p < .01$. In the model, drinks per week while abroad had a significant impact on alcohol-related consequences ($p < .001$), indicating that a 1-unit increase in drinks per week resulted in a 3% increase in consequences. The CCAPS-34 distress index did not predict consequences ($p = .386$) The positive Sojourner Adjustment factor, Social Interaction with Host Nationals, predicted increased rates of alcohol-related consequences ($p < .01$), such that a 1-unit increase on this scale predicted a 27% increase in consequences. The other three positive Sojourner Adjustment factors: Cultural Understanding and Participation ($p = .572$), Language Development and Use ($p = .745$), and Host Culture Identification ($p = .135$) did not have a significant impact on alcohol-related consequences. The two negative Sojourner Adjustment factors: Social Interaction with Co-Nationals ($p = .345$), and Homesickness/Feeling out of Place ($p = .184$) did not significantly predict alcohol-related consequences.

Table 4.1. Poisson Regression Results

Parameter	*B*	*SE B*	Exp *B*	Wald χ^2 (1 *df*)	*P*	*Change in* Log Likelihood
Step 1: Covariate						
Drinks per week while abroad	.036	.0022	1.037	286.634	.000	--
Step 2:						
Drinks per week while abroad	.036	.0022	1.037	283.867	.000	
CCAPS-34 Distress Index	.033	.0340	1.034	.951	.598	.94(1)
Step 3:						
Drinks per week while abroad	.039	.0024	1.039	266.973	.000	
CCAPS-34 Distress Index	.040	.0369	1.040	1.148	.551	
Positive Sojourner Adjustment Factors						
Social Interaction with Host Nationals	.175	.0501	1.191	12.243	.052	
Cultural Understanding & Participation	.069	.0462	1.071	2.233	.406	
Language Development and Use	.044	.0461	1.045	.901	.598	
Host Culture Identification	-.201	.0482	.818	17.416	.020	28.46(4)**
Step 4:						
Drinks per week while abroad	.040	.0026	1.040	225.668	.000	
CCAPS-34 Distress Index	.004	.0417	1.004	.009	.958	
Social Interaction with Host Nationals	.214	.0526	1.238	16.547	.023	
Cultural Understanding & Participation	.071	.0483	1.073	2.153	.412	
Language Development and Use	.020	.0470	1.021	.190	.808	
Host Culture Identification	-.192	.0487	.826	15.475	.028	
Negative Sojourner Adjustment Factors						
Social Interaction with Co-nationals	-.005	.0440	.995	.013	.950	
Homesickness/Feeling Out of Place	.099	.0425	1.104	5.384	.195	5.52(2)
Step 5:						
Drinks per week while abroad	.033	.0028	1.034	134.083	.000	
CCAPS-34 Distress Index	-.065	.0440	.937	2.167	.386	
Social Interaction with Host Nationals	.237	.0519	1.268	20.926	.007	
Cultural Understanding & Participation	.048	.0501	1.049	.922	.572	
Language Development and Use	-.027	.0487	.973	.305	.745	
Host Culture Identification	-.125	.0492	.882	6.462	.135	
Social Interaction with Co-Nationals	-.069	.0431	.933	2.576	.345	
Homesickness/Feeling Out of Place	.101	.0448	1.107	5.099	.184	
Drinking Motives						
Coping Motives	-.010	.0446	.990	.055	.891	
Social Motives	.417	.0548	1.517	57.842	.000	
Conformity Motives	.064	.0369	1.066	3.003	.308	
Enhancement Motives	-.011	.0542	.989	.041	.905	101(4)**

* $p < .05$ ** $p < .01$

Research Question 4: T-test

Research Question 4: How does mental health change for college students while they are abroad? To answer Question 4, the changes in participant pre-abroad mental health status and study abroad mental health status were calculated using paired-samples t-tests for each of the CCAPS-34 scales (Table 4.2, Table 4.5). There were statistically significant changes for two of the scales (Table 4.3). There was a statistically significant decrease in Social Anxiety scores from pre-departure (M = 1.78, SD = .69) to study abroad (M = 1.68, SD = .65), t (156) = 2.258, p < .05 (two-tailed). The mean decrease in Social Anxiety scores was .09427 (SD = .52) with a 95% confidence interval ranging from .01182 to .17672. The eta squared statistic (.03) indicated a small effect size.

In addition, there was a statistically significant increase in Eating Concerns scores from pre-departure (M = 1.07, SD = 1.12) to study abroad (M = 1.21, SD = 1.06), t (156) = -2.269, p < .05 (two-tailed). The mean increase in Eating Concerns scores was .1465 (SD = .81) with a 95% confidence interval ranging from -.27402 to -.01898. The eta squared statistic (.03) indicated a small effect size. There was not a statistically significant increase in the distress index scores from pre-departure to study abroad.

Table 4.2. Paired Samples Descriptive Statistics for CCAPS-34 Scales

		Mean	N	Standard Deviation	Standard Error Mean
Pair 1	Depression Pre-Abroad	.6210	157	.66147	.05279
	Depression Abroad	.6497	157	.69265	.05528
Pair 2	Anxiety Pre-Abroad	1.2066	157	.63159	.05041
	Anxiety Abroad	1.2304	157	.61427	.04902
Pair 3	Social_Anx. Pre-Abroad	1.7758	157	.68954	.05503
	Social_Anx. Abroad	1.6815	157	.64687	.05163
Pair 4	Academics Pre-Abroad	1.4904	157	.65222	.05205
	Academics Abroad	1.5637	157	.65774	.05249
Pair 5	Eating Pre-Abroad	1.0679	157	1.12137	.08949
	Eating Abroad	1.2144	157	1.06151	.08472
Pair 6	Hostility Pre-Abroad	.4533	157	.54786	.04372
	Hostility Abroad	.4777	157	.59109	.04717
Pair 7	Alcohol Pre-Abroad	.9761	157	.95943	.07657
	Alcohol Abroad	.9793	157	.92895	.07414
Pair 8	Distress Pre-Abroad	.9190	157	.57310	.04574
	Distress Abroad	.9513	157	.57118	.04559

Table 4.3. Paired Samples T-Tests

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Depression PreAbroad Depression Abroad	-.0286	.56745	.04529	-.11812	.06079	-.63	156	.528
Pair 2	Anxiety PreAbroad Anxiety Abroad	-.0237	.46808	.03736	-.09757	.05001	-.63	156	.525
Pair 3	Social_Anx PreAbroad Social_Anx Abroad	.0942	.52300	.04174	.01182	.17672	2.25	156	.025
Pair 4	Academics PreAbroad Academics Abroad	-.0732	.67181	.05362	-.17916	.03266	-1.36	156	.174
Pair 5	Eating PreAbroad Eating Abroad	-.1465	.80890	.06456	-.27402	-.01898	-2.26	156	.025
Pair 6	Hostility PreAbroad Hostility Abroad	-.0244	.51120	.04080	-.10501	.05617	-.59	156	.550
Pair 7	Alcohol PreAbroad Alcohol Abroad	-.0031	.64175	.05122	-.10435	.09798	-.062	156	.950
Pair 8	Distress PreAbroad Distress Abroad	-.0322	.42268	.03373	-.09888	.03438	-.95	156	.341

Research Question 5: Simple Regression

Research Question 5: Does pre-study abroad mental health predict sojourner adjustment? Several simple regression analyses were run to answer Question 5. For the first analysis, the plan was to include only participants who had elevated Distress Index scores on the pre-departure survey. Because only seven participants had elevated distress index scores at pre-departure, it was not possible to run the model as planned. Instead, a multiple regression was run using distress index scores for all participants (*N = 157*). There was a significant negative relationship between distress and Interaction with Host Nationals, indicating that as distress increased, interaction with host nationals decreased ($F(1, 155) = 10.147$, $p = .002$), with an R^2 of .061 and an Adjusted R^2 of .055 (Table 4.4). Thus, this model predicted almost 6% of the variance in Interaction with Host Nationals. (Table 4.4, Table 4.5, Table 4.6). There was also a significant negative relationship between distress and another positive Sojourner Adjustment Measure scale, Host Culture Identification, signifying that as distress increased, identification with the host culture decreased ($F(1, 155) = 10.474$, $p = .001$), with an R^2 of .063 and an Adjusted R^2 of .057. This model predicted also predicted close to 6% of the variance in Host Culture Identification. There was a significant relationship between distress and both negative Sojourner Adjustment Measure scales. The relationship between distress and Interaction with Co-Nationals was negative, indicating that as distress increased, interaction with co-nationals decreased ($F(1, 155) = 7.212$, $p = .008$), with an R^2 of 7.212 and an Adjusted R^2 of .038. This model predicted only 4% of the variance in Interaction with Co-Nationals. The relationship between distress and Homesickness was positive, signaling that as distress increased for participants, feelings of homesickness also increased ($F(1, 155) = 22.299$, $p < .001$), with an R^2

of .126 and an Adjusted R^2 of .12. The model predicted 12% of the variance in Homesickness/Feeling Out of Place.

Table 4.4. Model Summaries for the Distress Index and Sojourner Adjustment Measure

Dependent Variable	R[a]	R Square	Adjusted R Square	Standard Error of the Estimate
Social Interaction with Host Nationals	.248	.061	.055	.972
Cultural Understanding and Participation	.090	.008	.002	.999
Language Development and Use	.102	.010	.004	1.005
Host Culture Identification	.252	.063	.057	.971
Social Interaction with Co-Nationals	.211	.044	.038	.981
Homesickness/ Feeling Out of Place	.355	.126	.120	.938

[a.] Predictors: (Constant), Zscore(Distress)

Table 4.5. Pre-Departure Distress Index and Sojourner Adjustment Scales ANOVA

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.[a]
Social Interaction with Host Nationals	Regression Residual Total	9.585 146.415 156.000	1 155 156	9.585 0.945	10.147	0.002
Cultural Understanding & Participation	Regression Residual Total	1.258 154.742 156.000	1 155 156	1.258 0.988	1.260	0.263
Language Development and Use	Regression Residual Total	1.611 154.389 156.00	1 155 156	1.611 0.996	1.618	0.205
Host Culture Identification	Regression Residual Total	9.874 146.126 156.000	1 155 156	9.874 0.943	10.474	0.001
Social Interaction with Co-Nationals	Regression Residual Total	6.936 149.064 156.000	1 155 156	6.936 0.962	7.212	0.008
Homesickness/ Feeling Out of Place	Regression Residual Total	19.620 136.380 156.000	1 155 156	19.620 0.880	22.299	0.000

[a.] Predictors: (Constant), Zscore (Distress)

Table 4.6. Coefficients for Pre-Departure Distress Index Scores and Sojourner Adjustment Scales (*N* = 157)

Dependent Variable	Beta	*T*	Significance
Social Interaction with Host Nationals	-.248	-3.185	.002
Cultural Understanding and Participation	-.090	-1.123	.263
Language Development and Use	-.102	-1.272	.205
Host Culture Identification	-.252	-3.236	.001
Social Interaction with Co-Nationals	-.211	-2.686	.008
Homesickness/ Feeling Out of Place	.355	4.722	.000

Finally, although it was determined that there were two few subjects who reported high mental health distress to analyze them separately, it was decided to run a simple regression analysis using only participants who had low distress index cut scores on the pre-departure survey (*n = 116*). This might determine if those few with high distress were inordinately affecting the results of the regression using scores for all students. The analysis with low distress students only concluded that for participants who fell in the low cut range for the distress index at pre-departure, increased distress significantly predicted Homesickness ($F(1, 114) = 4.874$, $p = .029$), with an R^2 of .041 and an Adjusted R^2 of .033 (Table 4.7, Table 4.8, Table 4.9) while abroad. This model accounted for only 3% of the variance in Homesickness/Feeling Out of Place.

Table 4.7. Model Summaries for Low Pre-Departure Distress Index Scores and Sojourner Adjustment Scales (*n* = 116)

Dependent Variable	R[a]	R Square	Adjusted R Square	Std. Error of the Estimate
Social Interaction with Host Nationals	.031[a]	.001	-.008	.942
Cultural Understanding and Participation	.024[a]	.001	-.008	1.014
Language Development and Use	.026[a]	.001	-.008	1.005
Host Culture Identification	.028[a]	.001	-.008	.943
Social Interaction with Co-Nationals	.101[a]	.010	.002	.911
Homesickness/ Feeling Out of Place	.202[a]	.041	.033	.929

[a.] Predictors: (Constant), Zscore(Distress)

Table 4.8. Low Cut Pre-Departure Distress Index and Sojourner Adjustment Scales ANOVA

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.[a]
Social Interaction with Host Nationals	Regression Residual Total	0.0955 101.064 101.160	1 114 115	0.095 0.887	0.107	0.744
Cultural Understanding & Participation	Regression Residual Total	0.069 117.319 117.388	1 114 115	0.069 1.029	0.067	0.797
Language Development and Use	Regression Residual Total	0.078 115.117 115.195	1 114 115	0.078 1.010	0.077	0.782
Host Culture Identification	Regression Residual Total	0.081 101.435 101.516	1 114 115	0.081 0.890	0.091	0.763
Social Interaction with Co-Nationals	Regression Residual Total	0.981 94.656 95.637	1 114 115	0.981 0.830	1.182	0.279
Homesickness/ Feeling Out of Place	Regression Residual Total	4.207 98.409 101.616	1 114 115	4.207 0.863	4.874	0.029

a. Predictors: (Constant), Zscore (Distress)

Post-hoc Analyses

The decision was made to run post-hoc analyses to examine how each of the CCAPS-34 scales: Depression, Generalized Anxiety, Social Anxiety, Academic Distress, Eating Concerns, Hostility, and Alcohol Use, impacted alcohol-related consequences for participants while abroad. Regression analyses of a Poisson process were used. Entering drinks per week as the covariate, results indicated that Academic Distress ($p < .01$), Eating Concerns ($p < .001$), and Alcohol Use ($p < .001$) independently predicted increased alcohol-related consequences ($p < .001$) (Table 4.9). A1-unit increase on the Academic Distress subscale predicted a 21% increase in consequences, a 1-unit increase in the Eating Concerns subscale predicted a 14% increase in consequences, and a 1-unit increase in the Alcohol Use subscale predicted a 56% increase in consequences.

Table 4.9. Post-Hoc Poisson Regression Results

Parameter	*B*	*SE B*	Exp *B*	Wald χ^2 (1 *df*)	*P*
Drinks per week while abroad	.036	.0022	1.037	82.164	.000***
CCAPS-34 Depression	-.017	.0369	0.983	.060	.806
Drinks per week while abroad	.037	.0022	1.037	82.914	.000***
CCAPS-34 Generalized Anxiety	-.034	.0341	0.966	.295	.587
Drinks per week while abroad	.036	.0022	1.037	83.370	.000***
CCAPS-34 Social Anxiety	.014	.0346	1.014	.044	.834
Drinks per week while abroad	.037	.0022	1.038	92.088	.000***
CCAPS-34 Academic Distress	.192	.0342	1.211	9.854	.002**
Drinks per week while abroad	.036	.0021	1.036	82.130	.000***
CCAPS-34 Eating Concerns	.128	.0331	1.137	4.508	.034*
Drinks per week while abroad	.036	.0022	1.037	76.680	.000***
CCAPS-34 Hostility	.004	.0286	1.004	.006	.936
Drinks per week while abroad	.013	.0031	1.013	6.795	.009**
CCAPS-34 Alcohol Use	.444	.0394	1.560	50.093	.000***
* $p < .05$ **$p < .01$ ***$p < .001$					

Next, to compare changes from pre-departure drinking to study abroad drinking on the Daily Drinking Questionnaire (DDQ; Collins et al., 1985), a paired samples t-test was conducted (Table 4.10). There was not a statistically significant increase *(M* = 1.39, *SD* = 9.58), *t* (156)= 1.825, *p* = .07 (two-tailed) (Table 4.11).

Table 4.10. Paired Samples Statistics

		Mean	N	Standard Deviation	Standard Error Mean
Pair 1	Pre-departure Weekly Drinks	9.8726	157	11.19164	.893
	Abroad Weekly Drinks	11.2675	157	11.29677	.902

Table 4.11. Paired Samples T-Tests

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pre-departure Weekly Drinks – Abroad Drinks	-1.39490	9.57662	.76430	-2.90461	.11480	-1.825	156	.070

In conclusion, the results of this study show that while students who scored higher on the CCAPS-34 Distress Index in its entirety were not found to experience a significantly higher number of alcohol-related consequences than those with lower CCAPS-34 Distress Index scores, those with higher CCAPS-34 Academic Distress, Eating Concerns, or Alcohol Use scores while studying abroad were found to experience increased consequences to a significant degree.

In terms of the positive Sojourner Adjustment factors, Social Interaction with Host Nationals predicted increased alcohol-related consequences, whereas Host Culture Identification predicted decreased alcohol-related consequences. None of the negative Sojourner Adjustment Measure factors predicted increased alcohol-related consequences. Social Motives was the only category of Drinking Motives that predicted significantly increased consequences to a significant

degree. Finally, although not every step in the multiple regression found significance, the overall model entered in Step 5 of the regression analysis was statistically significant. Thus, the combination of drinks per week while abroad, the CCPAS-34 Distress Index, the positive and negative Sojourner Adjustment Measure scales, and Drinking Motives scales significantly predicted alcohol-related consequences for the participants.

Additionally, this study found that from pre-departure to study abroad only participant scores on two of the CCAPS-34 scales changed in statistically significant ways. There was a significant decrease in Social Anxiety scores from pre-departure to study abroad, and a significant increase in Eating Concerns scores from pre-departure to study abroad.

In terms of the relationship between pre-study abroad mental health and sojourner adjustment, higher pre-departure distress scores predicted lower scores on Interaction with Host Nationals, Host Culture Identification, and Interaction with Co-Nationals. Lastly, higher pre-departure distress scores predicted higher scores on Homesickness/Feeling Out of Place.

Chapter V: Discussion

The current findings extended the literature on factors that influence alcohol-related consequences for college students who are studying abroad. This chapter provides a summary and discussion of the results of this study. It highlights ways in which these findings are related to previous research, and it addresses the strengths and limitations of the study, implications of the findings, and recommendations.

Research Question 1: ***How does mental health impact alcohol-related consequences for college students studying abroad?***

The current study first examined the impact that mental health has on alcohol-related consequences for college students studying abroad. Given that previous research has suggested that students with poor mental health tend to endorse stronger motivations for drinking than their peers with stronger mental health (Kenney et al., 2013), and that students with mental health issues demonstrated increased alcohol-related consequences (e.g., Barrios et al., 2000; Dennhardt & Murphy, 2011; Keely-Weeder & Edwards, 2011; Krahn et al., 2005; Norberg, 2010; Weitzman, 2004), it was hypothesized that poorer mental health would be associated with increased alcohol-related consequences for participants abroad. Using the CCAPS-34 Distress Index as the barometer for participant mental health, the findings did not support this hypothesis. Because of the lack of significance for this question using the Distress Index, a decision was made by the researcher to conduct post-hoc analyses to determine if any specific dimensions of mental health impacted alcohol-related consequences for the current sample in order to provide further insight into this relationship.

Post-hoc Analyses Relevant to Research Question 1

Post-hoc analyses were conducted to further examine the relationship between mental health and alcohol-related consequences. When participant scores for each of the CCAPS-34 scales were examined, it was discovered that Academic Distress, Eating Concerns, and Alcohol Use independently predicted alcohol-related consequences, such that increased scores on any of these scales were related to increased alcohol-related consequences for participants at a significant level.

A substantial amount of empirical research has demonstrated the connection between alcohol consumption and impaired academic performance (Perkins, 2002). However, previous research examining the relationship between alcohol use and academics (Borden et al., 2011; Hummer, Pedersen, Mirza, & LaBrie, 2010; Liguori & Lonbaken, 2015; Perkins, 2002; Singleton & Wolfson, 2009) has predominantly focused on the negative impact that alcohol use has on academic performance, rather than the impact that academic distress has on drinking behaviors and associated consequences. It is likely that the relationship is bi-directional, and the results of the current study provide support for this perspective.

Pauley and Hesse (2009) discussed the impact that pressure to perform academically can have on increased stress levels for students. Research on the use of alcohol as a coping mechanism can offer an explanation for the use of alcohol by those who are academically distressed. Those who are distressed may turn to alcohol to help relieve uncomfortable feelings or to forget their worries (Cooper, 1993). Read, Wood, Kahler, Maddock, and Palfai (2003) found that coping motives demonstrated significant associations with alcohol problems. Further investigation might provide a clearer understanding of the relationship between academic

distress and alcohol-related consequences.

Previous research (Kelly-Weeder & Edwards, 2011; Krahn et al., 2005) has also demonstrated a connection between disordered eating behaviors and substance use and related consequences. Behaviors such as restricting caloric intake and bingeing combined with alcohol use have been shown to lead to increased alcohol-related consequences. It is likely that students who are studying abroad experience changes in their diet and exercise regimes as a result of living in a new country, and in some cases, living with a host family. It could be speculated that Eating Concerns increase for students who are studying abroad due to these changes. While the current study found that Eating Concerns predicted alcohol-related consequences, it important to note that the CCAPS-34 uses only three items to assess Eating Concerns, and therefore may not serve as an effective measure for gauging disordered eating behaviors. Further research using a more extensive assessment tool might help to clarify the relationship between disordered eating and alcohol-related consequences for students who are studying abroad.

In the main Regression Analysis conducted for this study, drinks per week while abroad significantly predicted alcohol-related consequences for participants. This finding supports previous research suggesting that heavier drinking is associated with increased alcohol-related consequences (Hummer et al., 2010; Pedersen et al., 2012). Therefore, it makes logical sense that the CCAPS-34 Alcohol Use scale also predicted consequences for participants. It is important to note that two of the four items that comprise the CCAPS-34 Alcohol Use scale (*When I drink alcohol, I can't remember what happened; and*, *I regret something that I did because of drinking*) could be considered alcohol-related consequences.

The Depression, Generalized Anxiety, Social Anxiety, and Hostility scales of the CCAPS-34 did not predict alcohol-related consequences for participants. Findings from previous research have been mixed in terms of the relationship between depression, drinking and alcohol-related consequences. One study (Cranford et al., 2009) found that those with major depression were less likely to engage in binge drinking, whereas another study (Weitzman, 2004) found that students with poor mental health/depression were more likely to report alcohol-related consequences. Therefore, the current study found additional support for the study conducted Cranford et al. but not that conducted by Weitzman. It is difficult to speculate why this is the case especially as the number of students who were assessed to have potentially significant mental health issues (including depression) at pre-departure was small.

Previous research has also found that for students who are highly anxious, more alcohol-related consequences occur when there is an expectation that alcohol use will assist with symptom reduction (Goldsmith et al., 2012). Findings on the relationship between social anxiety and alcohol-related consequences have been mixed, with some showing a significant relationship (Norberg et al., 2010; Villarosa et al., 2014) while others do not (Ham, Bonin & Hope, 2007; Ham & Hope, 2005). For students abroad, it is possible that the unfamiliar environment could serve as a protective factor against anxious students drinking more and experiencing consequences. Perhaps these students are attempting to remain aware given the fact that they are in a foreign environment. Another possibility is that anxious students might feel more comfortable in study abroad environments given that they are often among a small group of students. The sense of community offered may serve as a protective factor against consequences. Further exploration of this topic might provide clearer answers.

Studies have also documented the relationship between hostility, drinking, and alcohol-related consequences. Boyle, Mortensen, Grønbæk, & Barefoot (2007) found that hostility was associated with a deleterious drinking pattern characterized by a high number of drinks per occasion. Others studies have found that heavy drinking per occasion is positively associated with violence and hostility (Holder, 2008; Hughes, Anderson, Morleo, Bellis, 2008). While approximately 10% of the participants in the current study had elevated hostility cut scores on the CCAPS-34 while abroad, a relationship between hostility and alcohol-related consequences was not documented. It could be speculated that for study abroad students, noticeably hostile behavior could potentially jeopardize their opportunity to remain abroad. As a result, students might be more cautious about acting on feelings of hostility.

Research Question 2: ***How does sojourner adjustment impact alcohol-related consequences for college students studying abroad?***

It was hypothesized that higher scores on the negative Sojourner Adjustment Measure subscale, Social Interaction with Co-nationals, would predict increased alcohol-related consequences. It was also hypothesized that higher scores on the negative Sojourner Adjustment Measure subscale, Homesickness/Feeling Out of Place, would predict increased alcohol-related consequences. Neither of these hypotheses was supported. These results are incongruent with previous research findings. Pedersen and colleagues (2012) found that the two negative Sojourner Adjustment factors positively predicted alcohol-related consequences for college students studying abroad. The current study raises questions about whether or not Social Interaction with Co-Nationals and Homesickness/Feeling Out of Place are risks for alcohol-related consequences. As Pedersen et al. (2012) collected their data after students had returned from abroad and this study collected data during the study abroad experience, it is possible that

this accounted for differences. Given the inconsistent findings between the current study and those of Pedersen and colleagues (2012) with regard to these SAM subscales, more research is warranted.

In terms of the positive Sojourner Adjustment Measure subscales, it was hypothesized that higher scores on each of the positive SAM subscales (Social Interaction with Host Nationals, Cultural Understanding and Participation, Language Use and Development, and Host Culture Identification) would result in decreased alcohol-related consequences. Social Interaction with Host Nationals had a non-hypothesized inverse relationship with alcohol-related consequences, such that Social Interaction with Host Nationals predicted increased rates of alcohol-related consequences. In fact, only one of the four positive Sojourner Adjustment Measure Scales, Host Culture Identification, predicted decreased rates of alcohol-related consequences. These findings are predominantly inconsistent with those from previous research. Pedersen et al. (2012) found that three of the four positive SAM factors: Social Interaction with Host nationals, Language Development and Use, and Host Culture Identification predicted decreased rates of alcohol-related consequences. Conversely, they found that Cultural Understanding and Participation had an unexpected significant positive relationship on alcohol-related consequences.

Given the findings of Pedersen and colleagues (2012), an assumption was made by the researcher in this study that Social Interaction with Host Nationals would serve as a protective factor against alcohol-related consequences for students abroad. The results of the current study suggest otherwise. It could be speculated that students who interact with host nationals while abroad may be doing so in social situations that involve alcohol. Minimally, the results of this study suggest that Social Interaction with Host Nationals does not exclude students from being at risk for alcohol-related consequences.

In the current study, Host Culture Identification was the only positive SAM scale to predict decreased alcohol-related consequences for participants. This finding, consistent with previous research (Pedersen et al., 2012), suggests that when students integrate into the host culture and identify with it, they are less likely to experience alcohol-related consequences. Further, it could be speculated that as students behave in ways that are typical of members of their host country, they are less likely to engage in drinking behaviors that put them at risk for consequences. Because the SAM is a relatively new measure and has been used in a limited number of studies, additional research is warranted to provide further understanding of the role that sojourner adjustment has on alcohol-related consequences for college students who are studying abroad.

Research Question 3: ***How do drinking motives impact alcohol-related consequences for college students studying abroad?***

Because loneliness is a common experience for students who study abroad (Hunley, 2010), it was anticipated that participants might use alcohol as a way to cope with uncomfortable feelings during their time abroad. Further, because individuals who drink to cope have been found to be increased risk for alcohol-related consequences (Cooper, 1994; LaBrie et al., 2012b), it was hypothesized that Coping Motives would be a significant predictor for alcohol-related consequences. It was also hypothesized that higher scores on any of the other three Drinking Motives Questionnaire-Revised (Cooper, 1994) scales, Social Motives, Conformity Motives, or Enhancement Motives, would be associated with increased alcohol-related consequences.

Social Motives was the only subscale that uniquely predicted alcohol-related consequences for the participants. Further, of all of the predictor variables used in the current

study, Social Motives emerged as the strongest predictor for alcohol-related consequences. These findings are consistent with the results of the study conducted by Pedersen et al. (2012) examining the impact that drinking motives had on alcohol-related consequences for college students abroad. They, too, found that Social Motives was the only Drinking Motives Questionnaire-Revised (Cooper, 1994) scale that predicted consequences for students abroad. However, in the current study Social Motives was a stronger predictor for consequences than in the study conducted by Pedersen et al. (2012). A 1-unit increase in Social Motives in this study resulted in a 53% increase in consequences, whereas in the prior study, a 1-unit increase on the Social Motives scale led to 38% more consequences for students.

Among the college student population, there is often an emphasis placed on being social, and drinking alcohol is frequently associated with socializing. Students who are studying abroad often take a "YOLO" (You Only Live Once) approach to their time abroad and may engage in more social activities that include drinking due to "FOMO" (Fear of Missing Out). Considering this, the connection between social drinking motives and alcohol-related consequences is not surprising. The results provide support for the importance of providing students with harm-reduction strategies for drinking given the likelihood that many students will engage in drinking for social reasons while abroad.

Research Question 4: ***How does mental health change for college students while they are abroad?***

Because study abroad students face a range of stressors as a result of being in a new environment far away from home, and because there can be a lack of available mental health resources for students while abroad, it was hypothesized that mental health would decrease for participants while abroad, resulting in increased psychological distress. Of all the CCAPS-34

scales, only the Eating Concerns scale had a statistically significant increase in scores from pre-departure to study abroad. As discussed previously, study abroad students likely experience changes in their diet and exercise regimes as a result of being in a new living environment. Due to the fact that the CCAPS-34 Eating Concerns scale is comprised of only three items, caution must be used when interpreting these results. Additional research using a more extensive measure for eating behaviors and/or disordered eating might help provide further information about changes in eating, and perceptions of these changes by college students while abroad.

There was an unanticipated statistically significant decrease in Social Anxiety scores for students from pre-departure to abroad. It could be speculated that for students who experience social anxiety, the opportunity to be a part of a smaller community while abroad, often with scheduled activities, may help to alleviate symptoms of social anxiety. Also, the realization that their peers are also in a completely new environment might alleviate some of the perceptions of difference experienced by those with higher levels of social anxiety. It could also be speculated that having a study abroad experience in their near future increased students' feelings of social anxiety when they completed the CCAPS-34 prior to departure. Further investigation might illuminate the factors that led to decreased scores on the CCAPS-34 Social Anxiety scale.

Post-hoc Analyses Relevant to Research Question 4

Although there were not statistically significant increases on the Alcohol Use scale from pre-departure to abroad, post-hoc analyses were conducted to further examine changes in students' pre-departure drinking to study abroad drinking on the Daily Drinking Questionnaire (DDQ; Collins et al., 1985). Previous research has found that college students tend to increase the amounts of alcohol they consume while abroad (Hummer et al., 2010; Pedersen et al., 2010b).

The results of the post-hoc analysis indicated that from pre-departure to study abroad the increase was not statistically significant (p = .07) for participants. These results are consistent with those of Pedersen et al. (2009).

Research Question 5: ***Does pre-study abroad mental health predict sojourner adjustment?***

Several analyses were conducted to address whether or not pre-study abroad mental health predicted sojourner adjustment for participants. It was hypothesized that an elevated cut score on the Distress Index of the CCAPS-34 at pre-departure would predict higher scores on the negative Sojourner Adjustment scales (Social Interaction with Co-nationals, and Homesickness/Feeling Out of Place) and lower scores on the positive Sojourner Adjustment scales (Social Interaction with Host Nationals, Cultural Understanding and Participation, Language Use and Development, and Host Culture Identification). It was not possible to conduct the analysis as planned, however, due to the low number of participants who had elevated cut scores on the Distress Index at pre-departure. Therefore, post hoc, an analysis was conducted using scores from all participants. The hypothesis was partially supported. There was an unexpected negative relationship between distress and Interaction with Co-Nationals, indicating that as participants became more distressed, they interacted less with peers from their home country. While this relationship was not hypothesized, it is logical to deduce that students with stronger feelings of distress might have difficulty connecting with others, including others who were also studying abroad.

Conversely, as hypothesized, increased pre-departure distress predicted an increase in Homesickness/Feeling Out of Place for participants while abroad. These results provide support for the notion that study abroad may exacerbate feelings of distress for those with higher levels

of pre-departure distress, leaving them feeling disconnected and homesick once abroad. McCabe (2005) addressed this topic when identifying a range of stressors associated with study abroad, particularly for those with pre-existing mental health conditions. The results also support those from a study conducted by Hunley (2010), although in that study, the researcher did not examine pre-departure mental health. Rather, Hunley collected data while students were studying abroad and found that psychological distress and loneliness experienced by students while abroad were related to lower levels of functioning for the students.

In terms of the relationship between pre-abroad mental health and the positive Sojourner Adjustment scales, pre-abroad mental health distress predicted statistically significant decreases on two of the scales, Interaction with Host-Nationals, and Host Culture Identification, offering partial support for the hypothesis. Increased pre-study abroad distress did not negatively impact Cultural Understanding and Participation or Language Development and Use in a significant way as was hypothesized. It can be concluded that as students experienced increased levels of distress prior to going abroad, they were more likely to withdraw from interaction with others, both co-nationals and members of the host culture, while abroad. It could be speculated that for individuals with more pronounced feelings of distress, these feelings may create challenges in terms of forging connections with others while abroad. The results also indicated that as students experienced increased levels of pre-study abroad distress, they were less likely to identify with the host culture once abroad. Given that Host Culture Identification involves a certain level of engagement with the host culture in order to feel a part of it, rather than feeling disconnected from it, it is reasonable to conclude that higher levels of pre-departure distress may inhibit individuals from engaging with their host culture abroad to the level that they would be able to identify with it. It is also interesting to note that elevated distress scores at pre-departure did not

significantly affect the more academic categories of Cultural Understanding and Language Development and Use. Therefore, it can be speculated that elevated pre-departure distress scores may predict a compromised interpersonal experience for students while abroad though not a decreased understanding of the culture one is experiencing.

Lastly, it was hypothesized that participants with low cut scores on the Distress Index at pre-departure would have higher scores on the positive Sojourner Adjustment scales and lower scores on the negative Sojourner Adjustment scales while abroad. This hypothesis was not supported. For those with low cut scores on the Distress Index at pre-departure, low distress did not predict higher scores on the positive Sojourner Adjustment Measure scales, or lower scores on the negative SAM scales. However, there was an unanticipated significant positive relationship between distress and Homesickness/Feeling Out of Place. Results showed that for individuals who had low cut scores for the Distress Index at pre-departure, increased distress significantly predicted Homesickness/Feeling out of Place. These results indicate that regardless of where a student's score fell on the Distress Index prior to going abroad, increased distress during the study abroad experience was associated with increased feelings of Homesickness/Feeling Out of Place. Additionally, they suggest that one does not have to have a high level of distress at pre-departure in order to be vulnerable to feelings of homesickness while abroad. Considering the tremendous changes that students may be exposed to as a result of the study abroad experience, this is understandable.

Strengths of the Study

There are several key strengths of this study. It was the first study to investigate the impact that mental health distress has on alcohol-related consequences for college students

during their study abroad experience, addressing a gap in the literature noted by Pedersen and colleagues (2012). Not only do the results provide increased understanding about the impact that mental health has on alcohol-related consequences for college students who are studying abroad, they also provide significant descriptive data about the state of the mental health for a group of study abroad students, and the changes that occurred in their mental health from pre-abroad to study abroad. Given that few researchers have conducted studies that have comprehensively investigated the mental health of students abroad, this is a noteworthy contribution. Further, with the growing number of students who are studying abroad annually, and with the increased number of students who are presenting to college counseling centers with mental health concerns, this information is vital for university administrators and study abroad professionals in helping them to better understand and address student needs.

This study was also the first to examine the relationship that pre-abroad mental health has on the process of psychological and sociocultural adjustment, known as Sojourner Adjustment (Church, 1982), for study abroad students. The information gleaned from this study on the connection between these constructs was revealing and provides additional information for study abroad professionals, both in terms of preparing students to go abroad and supporting students once they are abroad. Pre-abroad mental health distress significantly predicted relationships with four of the six Sojourner Adjustment Scales (positive relationship with Homesickness/Feeling Out of Place, and negative relationship with Interaction with Co-Nationals, Interaction with Host-Nationals, and Host Culture Identification). The results provide quantitative evidence for what might seem intuitive to many study abroad professionals: students who are more distressed before going abroad are less likely to feel connected to their peers and host nationals once abroad, less likely to identify with the host culture, and more likely to experiences feelings of

homesickness. Finding ways to help alleviate and manage symptoms for students who are more distressed might foster richer abroad experiences for these students.

In addition to investigating the impact that mental health has on sojourner adjustment, another strength of this study is that it extended previous research utilizing the Sojourner Adjustment Measure (SAM: Pedersen et al., 2011b). Because the SAM is a relatively new assessment and has been used in only a limited number of studies, the results of this study offer additional insight into the impact that dimensions of sojourner adjustment included on the SAM have on alcohol-related consequences for students who are participating in study abroad. The findings of this study were partially inconsistent with previous findings indicating that further research on the connection between sojourner adjustment and alcohol-related consequences using the SAM is warranted in order to clarify the relationship.

Data in this study were collected at two points allowing for the opportunity to compare changes in participant mental health and daily drinking from pre-study abroad to study abroad. This study amended a limitation of the study conducted by Pedersen and colleagues (2012) in which students were surveyed about their alcohol-related experiences one month after their return home requiring them to rely upon their memories to recall experiences that had happened many weeks before. Data in the current study were instead collected while students were abroad, rather than retrospectively, allowing for information about students' experiences to be gathered in a more timely and accurate way.

Limitations

There are multiple limitations of this study. First, convenience sampling was used. Soliciting a larger pool of study abroad participants from multiple programs may have yielded a

more robust sample size, allowing for greater generalization of findings. Additionally, a larger sample size including a larger number of participants at each program location may have allowed for comparison between locations, providing more insight into participant differences by location. Research has suggested that participants in some locations demonstrate greater increases in drinking (Pedersen et al., 2011b). Further investigation might show if alcohol-related consequences for participants are also greater in some locations.

Perhaps the greatest limitation of this study was the overall response rate of 18.6%. While 243 (28.79%) of the 844 students who were participating in a study abroad program during Spring 2015 completed Survey One, and while 200 (24%) of the total participants completed Survey Two, only 157 individuals completed a second survey that could be linked to Survey One. The problem with matching surveys likely led to a smaller set of usable data. As discussed in the *Procedures* section of Chapter III, the researcher was initially informed that it would be possible for a private email to be generated to each individual who had completed Survey One directly through Qualtrics, ensuring participant confidentiality while only targeting those who had completed the first survey. The researcher was later informed by Qualtrics that this would not be possible.

As an alternative, participants were asked to create a code at the time they took Survey One. With the help of a member of the Qualtrics support staff, the researcher created a formula for the code that would be simple for participants to generate without revealing their identities (the first letter of their first name, the last letter of their last name plus the last four digits of their phone number).

The entire group of participants was contacted again at mid-semester requesting their participation in Survey Two, specifying that only those who took Survey One complete Survey Two. For Survey Two, participants were asked to enter the code they created for Survey One, and the formula for the code was provided. Likely, there were individuals who completed Survey Two who never completed Survey One and some who entered their code incorrectly. Unfortunately, this reduced the total response rate.

Questions are left about why students who completed Survey One may not have completed the follow-up survey, and why other students did not participate in the study at all. Would a larger sample size have painted a different picture, and in what ways would it have looked different? Regardless of students' reasons for not participating, questions remain about the approximately 600 students who did not participate in the study and whether or not those who did participate accurately represent the larger group.

When the results of the current study are compared to the results of the *National College Health Assessment* (ACHA, 2013) in which 83% of the 123,000 students surveyed felt overwhelmed, 55.9% felt very lonely, 45% felt hopeless, 31% felt so depressed that it was hard to function, and 51% felt overwhelming anxiety, several possible conclusions could be drawn. First, based on the data collected, the sample of students in this study was particularly healthy in terms of mental health. Approximately 75% of the participants fell in the low cut range for depression on the CCAPS-34 at pre-departure and while abroad. Only 7% of the participants fell in the elevated cut range for depression at pre-departure, and 10% fell in the elevated cut range for the CCAPS-34 while abroad. These percentages are significantly lower than the 31% in the *National College Health Assessment* (ACHA, 2013) who reported they were so depressed that it was hard to function. In the current study, approximately 8% of students had elevated cut scores

for Generalized Anxiety on the CCAPS-34 at pre-departure and while abroad, 14.6% had elevated cut scores for Social Anxiety at pre-departure, and 11.5% had elevated cut scores for Social Anxiety while abroad. These findings also appear much less concerning than those from the *National College Health Assessment* (ACHA, 2013) in which 51% of participants felt overwhelming anxiety.

It could also be speculated that students with more concerning mental health or drinking issues may not have participated in this study due to concerns about confidentiality and fear that if they were to be honest in their responses, it might negatively impact their ability to participate in a program. Additionally, for students with mental health concerns, reflecting on their mental health status or answering questions on the CCAPS-34 may trigger or stir feelings of distress. For some students, being asked questions about their personal experiences may beg them to consider issues they do not yet feel ready to address. Again, a larger sample size may have provided a more accurate snapshot of the overall group.

In addition to considering whether or not the participants in this study sufficiently represented the larger pool of students who were contacted by the researcher, another question that can be raised is whether or not students who study abroad are representative of the larger college student population. Results suggest that they are not. In the current study, approximately 50% of the participants had GPAs of 3.5 or higher, 42% had GPAs falling between a 3.0 and a 3.4, and only 7.6% had grade point averages below a 3.0. These grade point averages reflect solid academic performance on the part of the participants and are likely higher than average. Additionally, only 37% of the students in the current study had elevated scores for Generalized Anxiety at pre-departure, and 25% had elevated scores for Social Anxiety at pre-departure. While abroad, only 14% of the students had elevated scores for Generalized Anxiety,

and 17.5% had elevated scores for Social Anxiety. These percentages are lower than the findings of the National College Heath Assessment (ACHA, 2013) in which 51% of students indicated that they felt overwhelming anxiety within the past year, providing more possible evidence for the notion that students in the current study may not represent the average college student. It is important to note, however, that the CCAPS-34 (Locke et al., 2012), which was used in the current study, asks individuals to reflect on their experiences from only the past two weeks, not the past year.

In a longitudinal study with a final sample of 747 university students, Eisenberg, Golberstein, and Hunt (2009) found that depression was a significant predictor of lower GPA. In their study, the strongest negative predictor of academic performance was anhedonia, the lack of pleasure and interest in usual activities. They also found that co-occurring depression and anxiety were associated with lower GPAs, and that symptoms of eating disorders were associated with lower GPA. Based on their findings, it could be deduced that due to the strong academic performance of the participants in the current study, these students may be mentally healthier than students with less robust GPAs. Therefore, the sample in the current study was likely not representative of average college students. Further, because many study abroad programs have GPA requirements for entry, these requirements may filter out some students with more significant mental health problems whose grades have suffered as a result. Further research could shed light on this topic.

Another limitation of this study is that the CCAPS-34 (Locke et al., 2012), as a brief, multidimensional instrument, is not intended to assess all possible areas of mental health concern. The researcher made the decision to use CCAPS-34 in the current study due to its brevity and ease in scoring. Further, the CCAPS-34 was created for use with the college student population,

was normed on a sample of 59,606 college students at 97 universities (Center for Collegiate Mental Health, 2012), and is commonly used in college counseling centers throughout the United States. Several of the CCAPS-34 (Locke et al., 2012) subscales include only three or four items to assess the particular area of concern. Interestingly, the three subscales that independently predicted alcohol-related consequences in this study: Academic Distress, Eating Concerns, and Alcohol Use, are the CCAPS-34 subscales with the smallest number of items. According to Locke and colleagues (2012), it is vital that the CCAPS-34 is not the only data point used in assessing mental health. The use of more extensive measures of mental health might produce a clearer picture of the status of mental health for participants and the impact that mental health has on alcohol-related consequences for students who are studying abroad.

Given that this study closely replicated the one conducted by Pedersen et al. (2012), the Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b) was used to measure participants' sojourner adjustment. While previously there were no established measures of this concept (Pedersen et al., 2011b), the reality is that the SAM (Pedersen et al., 2011b) is a very new assessment tool that has not been utilized in many studies. The use of this instrument can also be considered a limitation in this study. The SAM (Pedersen et al., 2011b) was developed using exploratory and confirmatory factor analyses on the same sample of 248 students from the same institution. According to Kline (2005), the use of EFA and CFA on the same sample is not ideal. In the study used to develop the SAM (Pedersen et al., 2011b), participants provided retrospective reports of behavior approximately one month after they returned from their study abroad programs (Pedersen et al., 2011b). The use of retrospective reports could be considered a significant limitation in the development of this instrument due to threats to internal validity. Additionally, in the study conducted by Pedersen and colleagues (2011b), participants were

asked to reflect on their experiences abroad, while simultaneously, it is likely they were readjusting to life back in the United States. This readjustment process could have served as a confounding factor in participants' ability to accurately recall their perceptions of their time abroad.

Next, this study employed only self-report measures and did not utilize observer or behavioral ratings. Although the use of self-report instruments is pervasive, the possibility of bias and distortion on the part of subjects exists (Kazdin, 2003). Given that this study examined the mental health, daily drinking, sojourner adjustment, drinking motives, and drinking consequences, it is likely that social desirability may have influenced participant responses. For example, students suffering from symptoms related to mental health may have under-reported their experience of these symptoms at pre-departure for fear that accurately reporting them may have somehow impacted their ability to participate in a study abroad program. This speculation was echoed by McCabe (2005) whose extensive experience in international higher education led him to conjecture that students might inaccurately or incompletely fill out required study abroad medical forms for fear of repercussions such as not being able to participate in an abroad program.

Another limitation is that the design of the study did not include a post-return follow-up survey. While the inclusion of another survey once students returned from study-abroad may have diminished the total number of overall participants in the study due to attrition, the information would have allowed for a more complete understanding of the way mental health changes for students when going abroad. The ability to compare changes for students from abroad to return may have provided additional insight.

This study did not include a pre-study abroad measure of alcohol-related consequences for participants. The decision was made not to include a measure at pre-departure since the measure used to assess consequences while abroad in the study conducted by Pedersen and colleagues (2012) was a modified version of the RAPI (RAPI: White & Labouvie, 1989; modifications: Pedersen et al., 2012) to reflect situations that are specific to the study-abroad context. Therefore, the measure would not have been suitable to use in the pre-departure survey, and the researcher in the current study wanted to utilize the same measures used in the previous one to allow for comparisons. However, assessing alcohol-related consequences for participants prior to going abroad would have allowed for the ability to examine changes in consequences from pre-study abroad to study abroad. This information might have proven to be valuable in further understanding this issue.

Next, the majority of participants in this study were female (71.3%), limiting the generalizability of results. This percentage is higher than the number of women in the overall national study abroad population (65%) (Pedersen et al., 2010a). Additionally, 61% of the participants in this study were White, whereas the national average for participation in study abroad programs by White students is approximately 82%. While having a more ethnically diverse sample could be perceived as a strength of this study, this could also make it difficult to compare results with studies that were done predominantly with White students.

Another limitation of this study is that it did not control for gender or ethnicity, nor did it control for students who were born outside of the United States or those who were familiar with the language of the host country prior to studying abroad. Again, because this study closely replicated the one conducted by Pedersen et al. (2012), and because that study did not control for these variables, the decision was made not to control for them in this study. Further, the sample

size in the current study would not have allowed the researcher to control for all of these variables.

Implications for Practice and Recommendations

This study was the first to examine the mental health of study abroad participants and the impact that mental health has on alcohol-related consequences for these students, addressing a significant gap in the literature. The overall results of this study provide a valuable contribution to the small body of existing research that has been conducted with American college students who are studying abroad. Research with this subset of students is vital considering the growing number of students who are participating in study abroad programs. Additionally, as larger numbers of students are presenting to college counseling centers with mental health concerns, it is likely that more students who are psychologically vulnerable are applying for and participating in study abroad programs. Greater understanding about the status of study abroad participant mental health and the role that mental health has on the overall study abroad experience is crucial. Further research that includes a larger sample size from multiple programs and utilizes a more in-depth examination of student mental health is warranted, given the serious nature of this topic and possible negative implications to student safety and wellbeing. The addition of qualitative questions in a future study might also provide further insight. Additionally, extending the study to examine other drug use by study abroad participants might also provide a more complete understanding of the issue.

It could be argued that there is a need for better instrumentation to assess alcohol-related consequences. While the current study utilized a modified version of the Rutgers Alcohol Problem Index (RAPI: White & Labouvie, 1989; modifications: Pedersen, et al., 2012), this

assessment does not weight consequences differently. For example, a hangover is counted the same as getting mugged, robbed, or assaulted. Clearly, there are alcohol-related consequences that can be considered more precarious than others, and a revision of the RAPI or a new instrument that weights these consequences differently is warranted.

Despite the fact that it appears participants in this study may be mentally healthier than the average college student, 14% of the participants indicated that that they had thoughts of ending their life while abroad. These results raise more questions than answers, and additional research including more extensive mental health and suicide assessment tools might shed more light on this topic. Additionally, a post-hoc analysis comparing the pre-departure CCAPS-34 scores for those who completed both surveys versus those who completed only the first survey might also provide helpful information.

University administrators and study abroad professionals cannot afford to ignore the serious potential liabilities that exist due to the lack of available mental health resources for students who are studying abroad. There are several recommendations that can be integrated by programs to assist in addressing critical topics and providing support for students. First, thoughtful attention should be given to preparing students for their study-abroad experiences. Study abroad orientation programs should be mandatory for all participants, and these orientation programs should thoroughly address topics related to mental health, alcohol use and harm reduction strategies, and the development of coping and safety skills necessary for navigating life in a foreign culture. The topic of medication should be also addressed, and students should be encouraged to connect with their physicians and mental health providers to discuss medication management and potential sources of support for their time away. Finally, the topic of self-care

should be broached, and students should be to encouraged consider ways they can engage in self-care during their time abroad.

When possible, multiple orientation dates should be offered to accommodate student schedules, and the number of students attending each meeting should be kept to a reasonable size to ensure a greater likelihood that students remain engaged and focused. In instances where a student is unable to attend an orientation meeting due to scheduling conflicts, alternatives, such as requiring the student to attend a meeting with a study abroad professional to address the topics discussed at orientation, should be implemented to ensure that the student has received important information and has had the opportunity to ask questions. Requiring attendance at a pre-departure orientation also communicates to students the value that the program places on the important topics such as mental health and safety that are reviewed in the meetings.

Because pre-abroad orientation meetings tend to cover a wide range of topics and provide students with extensive information, it is important that the information presented at the meetings also be provided to students in written form after the meeting. This allows students time to review what was discussed in the orientation meeting, and it also accommodates visual learners and those who may have attention deficit issues.

Next, study abroad programs that are sponsored by U.S. based universities should work to create and maintain open lines of communication with the Counseling Center at their institution. Further, higher-level administrators in universities should encourage and support collaboration between these two areas. Counseling Centers in larger institutions may consider having one or two counseling professionals serve as dedicated contacts for the office of study abroad at their institution. These individuals can assist in providing important mental health

information to students at orientation meetings and serve as resources for study abroad professionals when concerns arise.

Some programs have U.S. based case managers who are available to assist in supporting students and their families when psychological, medical, or other crises arise. These individuals can fill a vital role, particularly in cases where a student from the university is participating in a program that is associated with a foreign university, because foreign universities may not have the same types of psychological support that are available at many U.S. based institutions.

Ideally, as part of their international support staff, programs should hire individuals who are professionally trained to provide mental health services for students abroad. While many study abroad programs may not be able to afford to maintain a dedicated mental health professional on staff at each of their international sites, at the very minimum, programs should establish a network of support sources for students who are distressed while abroad. Also, because students often spend time on trips led by faculty members while abroad, study abroad faculty as well as staff members should receive training related to college student mental health and how to identify, and appropriately respond to and support student mental health issues. Counseling center professionals are potential resources for conducting these trainings.

Once students are abroad, time should be dedicated to helping students develop skills and knowledge about the host culture. Shortly after students arrive, topics including cultural norms for drinking, dating, and dress should be addressed. Safety tips and contact information for a range of resources, including local study abroad staff members, police, and the U.S. Embassy should be provided to students. Cards with important contact numbers should be distributed and extra copies should be available in offices of staff members abroad. Brochures with information

about intercultural adjustment, mental health issues, alcohol and harm reduction strategies, and sexual assault should also be available to students in staff offices.

Holding mandatory weekly or bi-weekly meetings is another way that programs can provide a regular opportunity for students and program staff to connect. In these meetings, study abroad staff can disseminate important information. Further, they should encourage students to discuss their experiences and communicate concerns. Topics related to intercultural adjustment and communication can be discussed, and the importance of self-care can be reinforced. Occasionally, guest speakers can be invited to present information about opportunities to engage in local cultural activities. The benefits of holding regular meetings are multiple. For students who may be feeling lonely or isolated, a meeting provides a sense of consistency, and an opportunity to interact with other students and staff. It can help to build a sense of community. It is also a way for the staff to get to better know the students and provides an opportunity for staff members to observe students and potentially identify students who may appear to be struggling. Finally, holding regular meetings sends a message to students that the program cares about their experience and wellbeing. Research (Ozbay, Johnson, Dimoulas, Morgan, Charney, & Southwick, 2007) has documented the positive impact that social support has on mental health and overall wellness. It could be suggested that for students who are studying abroad, the perception of available support alone could help to reduce feelings of loneliness or mental distress that may be associated with adjusting to life in a new culture.

While some of these recommendations may be considered costly or time-consuming, the risks of not providing this type of support for students are both multiple and potentially serious. As the landscape regarding college student mental health continues to change, study abroad programs must adapt to better accommodate and support student mental health needs.

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Appendix A

Subject: Opportunity to participate in research on study abroad students!

Dear Spring 2015 Study Abroad Student,

My name is Laura Thompson, and I am a Doctoral Candidate at Syracuse University. Because you are enrolled in a Spring 2015 study abroad program, I am requesting your participation in a research study that I am conducting about the drinking behaviors of college students who are studying abroad.

All information will be kept anonymous, and your specific answers will not be linked to your identity in any way. If you agree to be a part of this study, you will be asked to complete a brief online survey that should take approximately 10-15 minutes to complete prior to going abroad. You will also have the opportunity to elect to enter a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). Your chance of winning is approximately 1 in 25. Winners will be randomly drawn at the end of Spring 2015 semester and will be notified via email and asked to provide an address to which the researcher can send the gift card.

Once you are abroad, you will be contacted again at the midpoint of the semester to complete a follow up survey that will take approximately 30 minutes to complete.

If you are 18 years of age or older ***and*** are enrolled in a study abroad program for Spring 2015 you are eligible to participate in this study.

If you have any questions, concerns, or complaints about the research, you may contact me at: lkthomps@syr.edu or my advisor Dr. Bernard at bernard@syr.edu or 315.443.2266.

Your involvement in this study is voluntary. Should you choose to participate, you have the option to withdraw at any point. The consent form is located on the first page of the study and provides additional details. Thank you in advance for your willingness to participate in this research.

Should you agree to participate, you may begin by clicking on the link below:

<Link to Qualtrics>

Sincerely,

Laura Thompson, Doctoral Candidate

Syracuse University

Appendix B

SPRING 2015

STUDY ABROAD PARTICIPANTS!

Your participation in a research study about factors that influence the drinking behaviors of college students who are studying abroad is requested.

- If you are 18 years of age or older and are enrolled in a study abroad program for Spring 2015 you are eligible to participate in this study.
- All information will be kept anonymous, and your specific answers will not be linked to your identity in any way.
- If you agree to be a part of this study, you will be asked to complete a brief online survey that should take approximately 10-15 minutes to complete prior to going abroad.
- Once you are abroad, you will be contacted again at the midpoint of the semester to complete a follow up survey that will take approximately 30 minutes to complete.
- You will also have the opportunity to elect to enter a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). Your chance of winning is approximately 1 in 25. (Winners will be randomly drawn at the end of Spring 2015 semester and will be notified via email and asked to provide an address to which the researcher can send the gift card.)
- You will be receiving an email request with a link to the study.

If you have any questions, concerns, or complaints about the research, you may contact me at: lkthomps@syr.edu or my advisor Dr. Bernard at bernard@syr.edu

Appendix C

Informed Consent

Laura Thompson of Syracuse University, Department of Counseling and Human Services invites you to be a part of a research study that explores the drinking behaviors of college students abroad. This study has been reviewed and approved by the Institutional Review Board of Syracuse University (approval # 14-269). I am asking you to participate because you are currently enrolled in a study abroad program for Spring 2015.

If you agree to be part of the research study, you will be asked to complete this initial computer survey that will take approximately 10-15 minutes to complete. At the end of the survey, you can elect to enter a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). Your odds for winning one of the gift cards is approximately 1 in 25. The random drawing for the gift cards will take place at the end of the Spring 2015 semester. Winners will be notified via the email address they provide when registering to participate in the survey. Winners will be asked to provide the researcher with an address where the gift card can be sent at the end of the Spring 2015 semester.

At midpoint of the Spring 2015 semester, you will be contacted and asked to complete the follow-up survey which will take approximately 30 minutes to complete.

Researchers will not be able to link your survey responses to you, but they will know that you participated in the research because you will be asked to log in. The survey software keeps your identifying information separate from the answers you provide to the survey. Only members of the research team will have access to the data. Whenever one works with email or the internet, there is always the risk of compromising privacy, confidentiality, and/or anonymity. Your confidentiality will be maintained to the degree permitted by the technology being used. It is important for you to understand that no guarantees can be made regarding the interception of data sent via the internet by third parties.

All results will be stored in Qualtrics and accessed on a secure computer in a locked office in the Counseling and Human Services department on campus at Syracuse University. I plan to publish the results of this study, but will not include any information that would identify you.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose to not answer an individual question or you may skip any section of the survey. Simply click “Next” at the bottom of the survey page to move to the next question.

My hope is that this research will contribute to the knowledge base about the experiences of college students abroad. While there are no direct benefits to your participation, it is possible that you might feel satisfaction from assisting in this goal. Although the risks of participating are minimal and similar to risks encountered in daily activities, it is possible that reflecting on your experiences could be stressful or cause emotional discomfort. Should this discomfort cause you

to want to take a break from completing the survey, you may do so and chose to return to the survey at a later time within one week as long as you use the same computer and browser. If at any time you no longer wish to participate in the study, you can withdraw from the study without penalty at any time. Though risk is estimated to be low, if discomfort does arise and you wish to speak to a professional, you are encouraged to contact your Study Abroad Site Director to receive a referral to a counselor. You may also contact the Syracuse University Counseling Center (315-443-4715), the Psychological Services Center (315-443-4595), or the Chaplains' staff of Hendricks Chapel (315-443-2901).

If you have any questions, concerns, or complaints about the research, you may contact me at: lkthomps@syr.edu or my advisor Dr. Bernard at bernard@syr.edu or 315.443.2266.

Additionally, if you have questions about your rights as a research participant, or wish to obtain information, ask questions or discuss any concerns about this study with someone other than the researcher, please contact the Syracuse University Institutional Review Board, 121 Bowne Hall, Syracuse, New York 13244-1200, (315) 443-3013, orip@syr.edu. Please print a copy of this consent form for your records.

I am 18 years of age or older.

Yes

No

I agree to participate in this research study.

Yes

No

Appendix D

Subject: It's time to complete the second survey!

Dear Spring 2015 Study Abroad Student,

Thank you again for your willingness to participate in this study investigating the drinking behaviors of college students who are studying abroad.

This email will link you to the second and final survey for this study, which should take approximately 10-15 minutes to complete. This is a reminder that all information will be kept anonymous, and your specific answers will not be linked to your identity in any way. The survey software keeps your identifying information separate from the answers you provide to the survey.

If you did not already register for the drawing, you may still do so. At the end of the survey, you have the opportunity to elect to enter a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). Your chance of winning is approximately 1 in 25. Winners will be randomly drawn at the end of Spring 2015 semester and will be notified via email and asked to provide an address to which the researcher can send the gift card.

If you have any questions, concerns, or complaints about the research, you may contact me at: lkthomps@syr.edu or my advisor Dr. Bernard at bernard@syr.edu or 315.443.2266.

Your involvement in this study is voluntary. Should you choose to participate, you have the option to withdraw at any point. The consent form is located on the first page of the survey and provides additional details. Thank you again for your participation.

Should you agree to continue your participation, you may begin by clicking on the link below:

<Link to Qualtrics>

Sincerely,

Laura Thompson, Doctoral Candidate

Syracuse University

Appendix E

Informed Consent

Laura Thompson of Syracuse University, Department of Counseling and Human Services invites you continue your participation in a research study that explores the drinking behaviors of college students abroad. This study has been reviewed and approved by the Institutional Review Board of Syracuse University (approval #14-269). You were initially asked to participate because you enrolled in a study abroad program for Spring 2015.

If you agree to continue your participation in this study, you will be asked to complete the second, and final, survey, which should take approximately 10-15 minutes to complete. After the first survey, you had the option to enter a drawing to win one of six gift cards ranging in value up to $75 (1 card is for $75, and 5 are for $25). If you did not enter the drawing at that time, you can still elect to enter in the drawing. Your odds for winning one of the gift cards is approximately 1 in 25. The random drawing for the gift cards will take place at the end of the Spring 2015 semester. Winners will be notified via the email address they provide when registering to participate in the survey. Winners will be asked to provide the researcher with an address where the gift card can be sent at the end of the Spring 2015 semester.

Researchers will not be able to link your survey responses to you, but they will know that you participated in the research because you will be asked to log in. The survey software keeps your identifying information separate from the answers you provide to the survey. Only members of the research team will have access to the data. Whenever one works with email or the internet, there is always the risk of compromising privacy, confidentiality, and/or anonymity. Your confidentiality will be maintained to the degree permitted by the technology being used. It is important for you to understand that no guarantees can be made regarding the interception of data sent via the internet by third parties.

All results will be stored in Qualtrics and accessed on a secure computer in a locked office in the Counseling and Human Services department on campus at Syracuse University. I plan to publish the results of this study, but will not include any information that would identify you.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose to not answer an individual question or you may skip any section of the survey. Simply click "Next" at the bottom of the survey page to move to the next question.

My hope is that participation in this research will contribute to the knowledge base about the experiences of college students abroad. While there are no direct benefits to your participation, it is possible that you might feel satisfaction from assisting in this goal. Although the risks of participating are minimal and similar to risks encountered in daily activities, it is possible that reflecting on your experiences could be stressful or cause emotional discomfort. Should this discomfort cause you to want to take a break from completing the survey, you may do so and chose to return to the survey at a later time within one week as long as you use the same computer and browser. If at any time you no longer wish to participate in the study, you can

withdraw from the study without penalty at any time. Though risk is estimated to be low, if discomfort does arise and you wish to speak to a professional, you are encouraged to contact your Study Abroad Site Director to receive a referral to a counselor. You may also contact the Syracuse University Counseling Center (315-443-4715), the Psychological Services Center (315-443-4595), or the Chaplains' staff of Hendricks Chapel (315-443-2901). Additionally, you may choose to speak with the Director of your study abroad program.

If you have any questions, concerns, or complaints about the research, you may contact me at: lkthomps@syr.edu or my advisor Dr. Bernard at bernard@syr.edu or 315.443.2266.

Additionally, if you have questions about your rights as a research participant, or wish to obtain information, ask questions or discuss any concerns about this study with someone other than the researcher, please contact the Syracuse University Institutional Review Board, 121 Bowne Hall, Syracuse, New York 13244-1200, (315) 443-3013, orip@syr.edu. Please print a copy of this consent form for your records.

I am 18 years of age or older.

Yes

No

I agree to participate in this research study.

Yes

No

Appendix F

Daily Drinking Questionnaire
(DDQ; Collins, Parks, & Marlatt, 1985)

INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK

IN THE CHART BELOW, PLEASE FILL-IN THE NUMBER OF DRINKS YOU CONSUMED ON A **TYPICAL WEEK** IN THE LAST **30 DAYS.**

First, think of a *typical week* in the last *30 days you.* (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.) Try to remember as accurately as you can, *how much* you *typically drank* in a week during that one-month period?

For each day of the week in the calendar below, fill in the **number of standard drinks typically consumed on that day (You can use the Standard Drink Guidelines below to assist).**

Day of Week	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Number of ***Drinks***							

<u>Standard Drink Guidelines</u>

Beer

Standard American BEER (3-5% alcohol), ***12 oz. can or bottle*** **= 1 standard drink**

Microbrew or European BEER (8-12% alcohol), ***½ of a 12 oz. can or bottle*** **= 1 standard drink**

Wine

Wine, ***4 oz. Glass*** **= 1 standard drink**

Wine Cooler, ***10 oz. Bottle*** **= 1 standard drink**

Liquor

Hard Liquor (80 Proof), ***1 ½ oz. or One Standard Shot*** **= 1 standard drink**

Hard Liquor (100 Proof), ***1 oz.*** **= 1 standard drink**

Appendix G

CCAPS-34 (Locke et al., 2012)

INSTRUCTIONS: The following statements describe thoughts, feelings, and experiences that people may have. Please indicate how well each statement describes you, during the past two weeks, from "not at all like me" (0) to "extremely like me" (4), by marking the correct number. Read each statement carefully, select only one answer per statement, and please do not skip any questions.

1. I am shy around others.
2. My heart races for no good reason.
3. I feel out of control when I eat.
4. I don't enjoy being around people as much as I used to.
5. I feel isolated and alone.
6. I think about food more than I would like to.
7. I am anxious that I might have a panic attack while in public.
8. I feel confident that I can succeed academically.
9. I have sleep difficulties.
10. My thoughts are racing.
11. I feel worthless.
12. I feel helpless.
13. I eat too much.
14. I drink alcohol frequently.
15. I have spells of terror or panic.
16. When I drink alcohol I can't remember what happened.
17. I feel tense.
18. I have difficulty controlling my temper.
19. I make friends easily.
20. I sometimes feel like breaking or smashing things.
21. I feel sad all the time.

22. I am concerned that other people do not like me.
23. I get angry easily.
24. I feel uncomfortable around people I don't know.
25. I have thoughts of ending my life.
26. I feel self conscious around others.
27. I drink more than I should.
28. I am not able to concentrate as well as usual.
29. I am afraid I may lose control and act violently.
30. It’s hard to stay motivated for my classes.
31. I have done something I have regretted because of drinking.
32. I frequently get into arguments.
33. I am unable to keep up with my schoolwork.
34. I have thoughts of hurting others.

Depression = Mean (items 4, 5, 11, 12, 21, 25)

Generalized Anxiety = Mean (items 2, 7, 9, 10, 15, 17)

Social Anxiety = Mean (items 1, 19, 22, 24, 26)

Academic Distress = Mean (items 8, 28, 30, 33)

Eating Concerns = Mean (items 3, 6, 13)

Hostility = Mean (items18, 20, 23, 29, 32, 34)

Alcohol Use = Mean (items14, 16, 27, 31)

Distress Index = Mean (items 2, 4, 5, 7, 9, 10, 11, 12, 15, 17, 20, 21, 22, 23, 25, 26, 28, 29, 30, 33)

Appendix H

Demographics Questionnaire

1. My current age is _____.
2. My gender is _____ . (male, female, transgender, other)
3. My ethnicity is _____.
   (Black or African American, Hispanic/Latino, American Indian, Asian, White/Caucasian, Multi-Racial, Other)
4. Do you identify as:

   (Heterosexual/straight; Gay or Lesbian; Bisexual)
5. What is your current class standing? (Freshman, Sophomore, Junior, Senior)
6. What is your academic major?
7. What is your cumulative grade point average?
8. Are you a member of a Greek Life? (yes, sorority; yes, fraternity; no)
9. Are you a member of an athletic team?
10. Where do you currently attend school (your home institution)?
11. What study abroad program are you participating in?

Appendix I
Sojourner Adjustment Measure (SAM; Pedersen et al., 2011b)

Considering *your entire time abroad*, please indicate how much you agree with each of the following statements. Rate items along the following scale:

Disagree strongly	Disagree moderately	Disagree slightly	Neither disagree nor agree	Agree slightly	Agree moderately	Agree strongly
1	2	3	4	5	6	7

1. Missed my family and friends back home (factor 6)
2. Felt out of place in my host country (factor 6)
3. Felt sad or depressed about being far from home (factor 6)
4. Spent a good amount of time meeting and conversing with local people (factor 1)
5. Spent a good amount of time meeting and conversing with Americans (factor 5)
6. Enhanced my understanding of my host country's culture (factor 2)
7. Actively tried to learn more about local customs and traditions in my host country (factor 2)
8. Gained insight into the culture of my host country (factor 2)
9. Felt anxious or nervous about being far from home (factor 6)
10. Developed my own perspective of my host country (factor 2)
11. Socialized a good deal with local people from my host country (factor 1)
12. Socialized a good deal with other Americans (factor 5)
13. Subscribed to the values of my host country (factor 4)
14. Increased my understanding of my host country's language (or local dialect/idioms) (factor 3)
15. Behaved in ways that are typical of members of my host country (factor 4)
16. Actively tried to make American acquaintances (factor 5)
17. Felt like once I returned home I would maintain some of the cultural-specific practices and values I learned by living in my host country (factor 4)
18. Had deep and meaningful conversations with local people (factor 1)
19. Had meaningful social interactions with local people (factor1)
20. Had meaningful social interactions with Americans (factor 5)
21. Used my host country's language (or local dialect/idioms) to communicate with local people (factor 3)
22. Learned about the local language by communicating with local people in my host country's language (or local dialect/idioms) (factor 3)
23. Had long conversations with local people using the host country's language or local dialect/idiom (factor 3)
24. Subscribed to the religious and/or political beliefs of my host country (factor 4)

**Note.* Inclusion of the "Factor" is for information purposes only. The actual measure does not contain this column, nor does it contain the description of the factors below.

Factor 1 = social interaction with host nationals

Factor 2 = cultural understanding and participation

Factor 3 = language development and use

Factor 4 = host culture identification

Factor 5 = social interaction with co-nationals

Factor 6 = homesickness/feeling out of place

Appendix J

Drinking Motives Questionnaire-Revised (Cooper, 1994)

Consider your reasons for drinking during your time abroad. Please read each item below and rate from 1 to 5 based on the frequency you drink for each of these reasons.

1=almost never/never

2=some of the time

3=half of the time

4=most of the time

5=almost always/always

1. I drink to forget my worries. (motive 2)
2. I drink because my friends pressure me to drink. (motive 4)
3. I drink because it helps me enjoy a party. (motive 1)
4. I drink because it helps me when I feel depressed or nervous. (motive 2)
5. I drink to be sociable. (motive 1)
6. I drink to cheer me up when I'm in a bad mood. (motive 2)
7. I drink because I like the feeling. (motive 3)
8. I drink so that others won't tease me about not drinking. (motive 4)
9. I drink because it's exciting. (motive 3)
10. I drink to get high. (motive 3)
11. I drink because it makes social gatherings more fun. (motive 1)
12. I drink to fit in. (motive 4)
13. I drink because it gives me a pleasant feeling. (motive 3)
14. I drink because it improves parties and celebrations. (motive 1)
15. I drink because it helps me feel more self-confident and sure of myself. (motive 2)
16. I drink to celebrate a special occasion with friends. (motive 1)
17. I drink to forget about my problems. (motive 2)
18. I drink because it's fun. (motive 3)
19. I drink to be liked. (motive 4)
20. I drink so I won't feel left out. (motive 4)

**Note.* Inclusion of the "Motive" is for information purposes only. The actual measure does not contain this information.

Motive 1 = social motive

Motive 2 = coping motive

Motive 3 = enhancement motive

Motive 4 = conformity motive

Appendix K

Rutgers Alcohol Problem Index Modified (RAPI: White & Labouvie, 1989; modifications: Pedersen, et al., 2012)

Indicate whether or not you've experienced the following things as a result of drinking during your time abroad.

1. Had a hangover the day after drinking
2. Threw up during or after drinking
3. Found myself in a situation where I did not remember all or parts of a night
4. Embarrassed myself by saying or doing something I regretted
5. Spent more money than I had planned on alcohol
6. Ended up drinking on days that I had not planned on
7. Passed out from drinking (that is, fell asleep before I wanted to)
8. Missed class
9. Felt guilty or bad about myself
10. Noticed that I needed more alcohol in order to feel the same effect
11. Found that I spent more time than I wanted drinking or partying
12. Became emotionally homesick after I had been drinking
13. Found myself in a dangerous situation that I would not have been in sober
14. Had difficulty making my way back home at the end of the night (i.e., missed transportation, had to spend money on a cab)
15. Injured myself (e.g., fell, badly cut self, broke a bone)
16. Got into an argument or tense situation with another member(s) of my study-abroad group
17. Noticed that I was not acting/behaving like myself
18. Had someone from home or abroad tell me that I had not been acting like myself
19. Had sex with someone I would not have had sex with sober
20. Broke a local law while drinking but did not get caught
21. Tried to limit my drinking but found it difficult
22. Lost an important item (such as cell phone, keys, wallet, passport)
23. Had unprotected sex
24. Had a friend bail me out of a bad situation I would not have been in if sober
25. Neglected or avoided friends/family back home
26. Got into a fight, heated argument, or bad situation with a local
27. Got into a fight with a close friend from back home
28. Felt like my school work or class attendance was suffering as a result of partying too much
29. Cheated (i.e, hooking up, sex) on a boyfriend/girlfriend who was back home
30. Missed flights, trains, or disrupted my travel plans
31. Felt like my cultural experience was suffering as a result of partying too much
32. Was confronted about my drinking by a member of the study-abroad staff or fellow student
33. Missed class or program field trips

34. Got mugged, robbed, or assaulted
35. Got in trouble with study-abroad staff at host country or with school back home
36. Got in trouble with local police or authorities
37. Friends/family back home avoided me
38. Did something to offend or upset my host family
39. Felt isolated from the group because of my behavior related to drinking

Appendix L: Data Corresponding to Descriptive Statistics

Table L.1. Pre-Departure Weekly Drinking (Overall, By Gender, By Age)

	N/n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Weekly Drinks	157	9.8726	7	0	11.19	0	64
Weekly Drinks By Gender							
Males	43	13.8605	9	0	14.46	0	64
Females	112	8.3929	6	0	9.39	0	61
Transgender	1	3	3	3	-	3	3
Other	1	11	11	11	-	11	11
Weekly Drinks By Age							
Under 21	112	9.8929	6.50	.00	11.57144	.00	64.00
21 and over	45	9.8222	8.00	.00	10.30950	.00	46.00

Table L.2. Pre-Departure Drinks Per Week Breakdowns

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Drinks	24	15.3	15.3	15.3
1-7 Drinks	58	36.9	36.9	52.2
8-14 Drinks	42	26.8	26.8	79.0
15-21 Drinks	17	10.8	10.8	89.8
22-28 Drinks	4	2.5	2.5	92.4
29-35 Drinks	5	3.2	3.2	95.5
36-42 Drinks	3	1.9	1.9	97.5
43-49 Drinks	2	1.3	1.3	98.7
50+ Drinks	2	1.3	1.3	100.0
Total	157	100.0	100.0	--

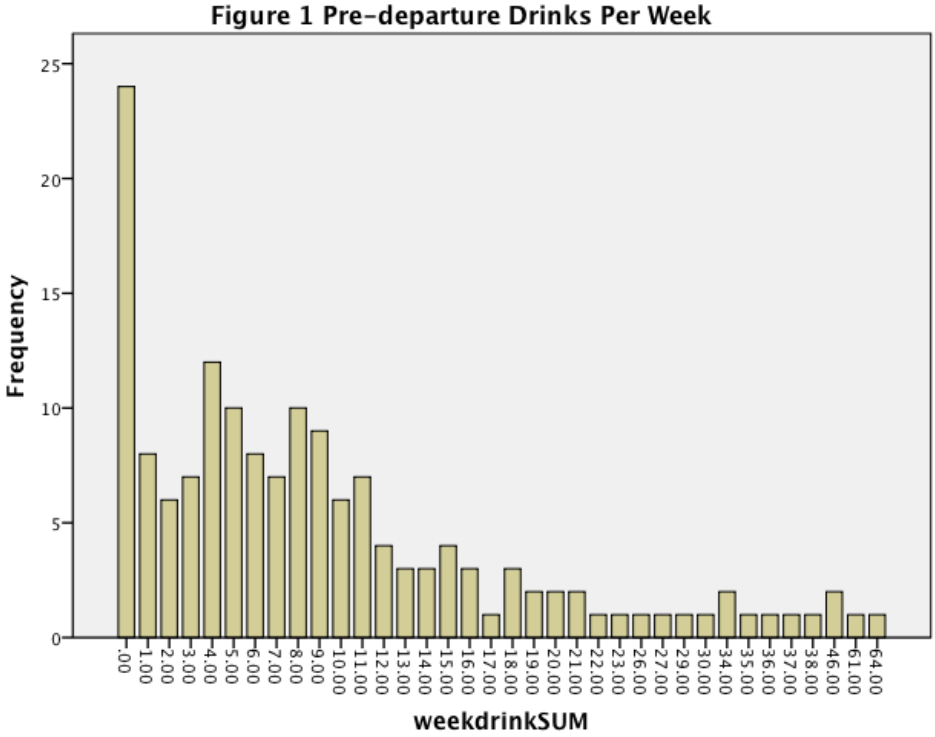

Table L.3. Pre-Departure Daily Drinking Overall

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday	.1783	.0000	.00	.61502	.00	4.00
Monday	.0701	.0000	.00	.30202	.00	2.00
Tuesday*	.7500	.0000	.00	2.15414	.00	15.00
Wednesday	.1592	.0000	.00	.58298	.00	4.00
Thursday	2.0446	.0000	.00	3.29012	.00	16.00
Friday	3.1592	3.0000	.00	3.42036	.00	15.00
Saturday	3.5493	3.0000	.00	3.54930	.00	20.00

*Missing: 1

Table L.4. Pre-Departure Daily Drinking By Gender

	n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday							
Males	43	.2791	.0000	.00	.73438	.00	4.00
Females	112	.1429	.0000	.00	.56723	.00	4.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	0	.0000	.00	-	.00	.00
Monday							
Males	43	.1395	.0000	.00	.46708	.00	2.00
Females	112	.0446	.0000	.00	.20745	.00	1.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	0	.0000	.00	-	.00	.00
Tuesday							
Males	43	1.3023	.0000	.00	3.07474	.00	15.00
Females	112	.5315	.0000	.00	1.65595	.00	10.00
Transgender	1	2.000	2.000	2.00	-	2.00	2.00
Other	1	0	.0000	.00	-	.00	.00
Wednesday							
Males	43	.1860	.0000	.00	.76394	.00	4.00
Females	112	.1429	.0000	.00	.49968	.00	3.00
Transgender	1	1.00	1.00	1.00	-	1.00	1.00
Other	1	0	.0000	.00	-	.00	.00
Thursday							
Males	43	2.8372	.0000	.00	4.07039	.00	15.00
Females	112	1.7589	.0000	.00	2.92933	.00	16.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	2.00	2.00	2.00	-	2.00	2.00
Friday							
Males	43	4.5814	3.00	.00	4.18747	.00	15.00
Females	112	2.6339	2.00	.00	2.94084	.00	15.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	4.00	4.00	4.00	-	4.00	4.00
Saturday							
Males	43	4.5349	4.0000	.00	4.08452	.00	15.00
Females	112	3.1429	3.0000	.00	3.27386	.00	20.00
Transgender	1	0	0	.0000	-	.00	.00
Other	1	5.00	5.00	5.00	-	.00	.00

Table L.5. Pre-Departure Daily Drinking By Gender

	n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday							
Under 21	112	.1786	.0000	.00	.58839	.00	4.00
21 and Over	45	.1778	.0000	.00	.68387	.00	4.00
Monday							
Under 21	112	.0536	.0000	.00	.26301	.00	2.00
21 and Over	45	.1111	.0000	.00	.38271	.00	2.00
Tuesday							
Under 21	112	.7027	.0000	.00	2.19750	.00	15.00
21 and Over	45	.8667	.0000	.00	2.06265	.00	9.00
Wednesday							
Under 21	112	.1161	.0000	.00	.56546	.00	4.00
21 and Over	45	.2667	.0000	.00	.61791	.00	3.00
Thursday							
Under 21	112	1.9643	.0000	.00	3.33404	.00	16.00
21 and Over	45	2.2444	.0000	.00	3.20621	.00	12.00
Friday							
Under 21	112	3.2500	3.00	.00	3.43144	.00	15.00
21 and Over	45	2.9333	2.00	.00	3.42053	.00	15.00
Saturday							
Under 21	112	3.6339	3.00	.00	3.64159	.00	20.00
21 and Over	45	3.2222	3.00	.00	3.32954	.00	12.00

Table L.6. Pre-Departure CCAPS-34 Descriptive Statistics (*N* = 157)

	Missing	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
I am shy around others	0	1.59	2.00	2	1.07334	0	4
My heart races for no reason	1	.9038	1.00	0	1.02562	0	4
I feel out of control when I eat	0	.8025	0	0	1.14600	0	4
I don't enjoy being around people as much as I used to	0	.9045	1.0	0	1.01769	0	4
I feel isolated and alone	1	.8718	1.00	0	1.03934	0	4
I think about food more than I would like to	0	1.2293	1.00	0	1.31008	0	4
I am anxious that I might have a panic attack while in public	1	.4359	0	0	.89572	0	4
I feel confident that I can succeed academically	0	3.242	3.00	4	.93645	0	4
I have sleep difficulties	0	2.6115	3.00	4	1.26415	0	4
My thoughts are racing	0	1.6561	2.0	2	1.22847	0	4
I feel worthless	0	.5159	0	0	.83670	0	4
I feel helpless	0	.5414	0	0	.80456	0	4
I eat too much	0	1.1720	1.00	0	1.33098	0	4
I drink alcohol frequently	0	1.2420	1.00	0	1.2420	0	4
I have spells of terror or panic	0	.5860	0	0	1.08631	0	4
When I drink alcohol, I can't remember what happened	0	.7197	0	0	1.00533	0	4
I feel tense	2	1.0323	1.00	0	1.11320	0	4
I have difficulty controlling my temper	1	.5796	0	0	.88526	0	4
I make friends easily	1	2.6026	3	3	1.03288	0	4
I sometimes feel like breaking or smashing things	0	.6815	0	0	.97427	0	4
I feel sad all the time	0	.6624	0	0	.91675	0	4
I am concerned that other people do not like me	0	1.5159	1.00	0	1.24862	0	4
I get angry easily	0	.77261	0	0	.93103	0	4
I feel uncomfortable around people I do not know	2	1.5935	1.00	1	1.25199	0	4
I have thought of ending my life	0	.2357	0	0	.67120	0	4
I feel self conscious around others	0	1.5796	2.00	2	1.22541	0	4
I drink more than I should	0	.7580	0	0	1.08250	0	4
I am not able to concentrate as well as usual	0	1.0255	1.00	0	1.13764	0	4
I am afraid that I might lose control and act violently	0	.2038	0	0	.60700	0	4
It's hard to stay motivated for my classes	0	1.1274	1.00	0	1.21279	0	4
I have done something I regretted because of drinking	1	1.1923	1.00	0	1.31549	0	4
I frequently get into arguments	0	.4522	0	0	.77166	0	3
I am unable to keep up with my homework	0	.5669	0	0	.94240	0	4
I have thoughts of hurting others	0	.0764	0	0	.28959	0	2

Table L.7. Pre-Departure CCAPS-34 Cut Scores (*N* = 157)

	Low		Mild		Elevated	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Depression	118	75.2	28	17.8	11	7.0
Generalized Anxiety	60	38.2	84	53.5	13	8.3
Social Anxiety	72	45.9	62	39.5	23	14.6
Academic Distress	80	51.0	61	38.9	16	10.2
Eating Concerns	97	61.8	12	7.6	48	30.6
Hostility*	123	78.3	19	12.1	14	8.9
Alcohol Use*	70	44.6	29	18.5	57	36.3
Distress Index	116	73.9	34	21.7	7	4.5

* Missing: 1

Table L.8. Pre-Departure CCAPS-34 Cut Scores By Gender (*N* = 157)

	Low		Mild		Elevated	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Males (*n* = 43)						
Depression	30	69.8	11	25.6	2	4.7
Generalized Anxiety	21	48.8	19	44.2	3	7.0
Social Anxiety	22	51.2	18	41.9	3	7.0
Academic Distress	21	48.8	18	41.9	4	9.3
Eating Concerns	32	74.4	4	9.3	7	16.3
Hostility	33	76.7	7	16.3	3	7.0
Alcohol Use	18	41.9	9	20.9	16	37.2
Distress Index	33	76.7	10	23.3	-	-
Females (*n* = 112)						
Depression	39	34.8	63	56.3	10	8.9
Generalized Anxiety	97	61.8	12	7.6	48	30.6
Social Anxiety	49	43.8	43	38.4	20	17.9
Academic Distress	59	52.7	42	37.5	11	9.8
Eating Concerns	63	56.3	8	7.1	41	36.6
Hostility*	89	79.5	11	9.8	11	9.8
Alcohol Use*	51	45.5	20	17.9	40	35.7
Distress Index	82	73.2	23	20.5	7	6.3
Transgender (*n* = 1)						
Depression	1	100	-	-	-	-
Generalized Anxiety	-	-	1	100	-	-
Social Anxiety	1	100	-	-	-	-
Academic Distress	-	-	1	100	-	-
Eating Concerns	1	100	-	-	-	-
Hostility	1	100	-	-	-	-
Alcohol Use	1	100	-	-	-	-
Distress Index	1	100	-	-	-	-
Other (*n* = 1)						
Depression	1	100	-	-	-	-
Generalized Anxiety	-	-	1	100	-	-
Social Anxiety	-	-	1	100	-	-
Academic Distress	-	-	-	-	1	100
Eating Concerns	1	100	-	-	-	-
Hostility	-	-	1	100	-	-
Alcohol Use	-	-	-	-	1	100
Distress Index	-	-	1	100	-	-

*Missing: 1

Table L.9. Pre-Departure CCAPS-34 Items 25, 29, 34

	Frequency	Percent	Valid Percent	Cumulative Percent
I have thoughts of ending my life.				
Not at all like me (0)	134	85.4	85.4	85.4
(1)	14	8.9	8.9	94.3
(2)	6	3.8	3.8	98.1
(3)	1	0.6	0.6	98.7
Extremely like me (4)	2	1.3	1.3	100.0
I am afraid I may lose control and act violently.				
Not at all like me (0)	136	86.6	86.6	86.6
(1)	14	8.9	8.9	95.5
(2)	4	2.5	2.5	98.1
(3)	2	1.3	1.3	99.4
Extremely like me (4)	1	0.6	0.6	100.0
I have thoughts of hurting others.				
Not at all like me (0)	146	93.0	93.0	93.0
(1)	10	6.4	6.4	99.4
(2)	1	0.6	0.6	100.0
(3)	0	0	0	100.0
Extremely like me (4)	0	0	0	100.0
Total	157	100.0	100.0	--

Table L.10. Abroad Weekly Drinking (Overall, By Gender, By Age)

	N/n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Weekly Drinks	157	11.2675	8	0	11.29677	0	60
Weekly Drinks By Gender							
Males	43	15.1977	12	0	14.67308	0	60
Females	112	9.8795	7	0	9.43523	0	53
Transgender	1	2	2	2	-	2	2
Other	1	7	7	7	-	7	7
Weekly Drinks By Age							
Under 21	112	11.3839	8.00	6.00	11.36535	.00	53.00
21 and Over	45	10.9778	10.00	.00	11.24619	.00	60.00

Table L.11. Abroad Drinks Per Week Breakdowns

	Frequency	Percent	Valid Percent	Cumulative Percent
0 Drinks	16	10.2	10.2	10.2
1-7 Drinks	58	36.9	36.9	47.1
8-14 Drinks	41	26.1	26.1	73.2
15-21 Drinks	20	12.7	12.7	86.0
22-28 Drinks	10	6.4	6.4	92.4
29-35 Drinks	6	3.8	3.8	96.2
36-42 Drinks	1	.6	0.6	96.8
43-49 Drinks	2	1.3	1.3	98.1
50+ Drinks	3	1.9	1.9	100.0
Total	157	100.0	100.0	--

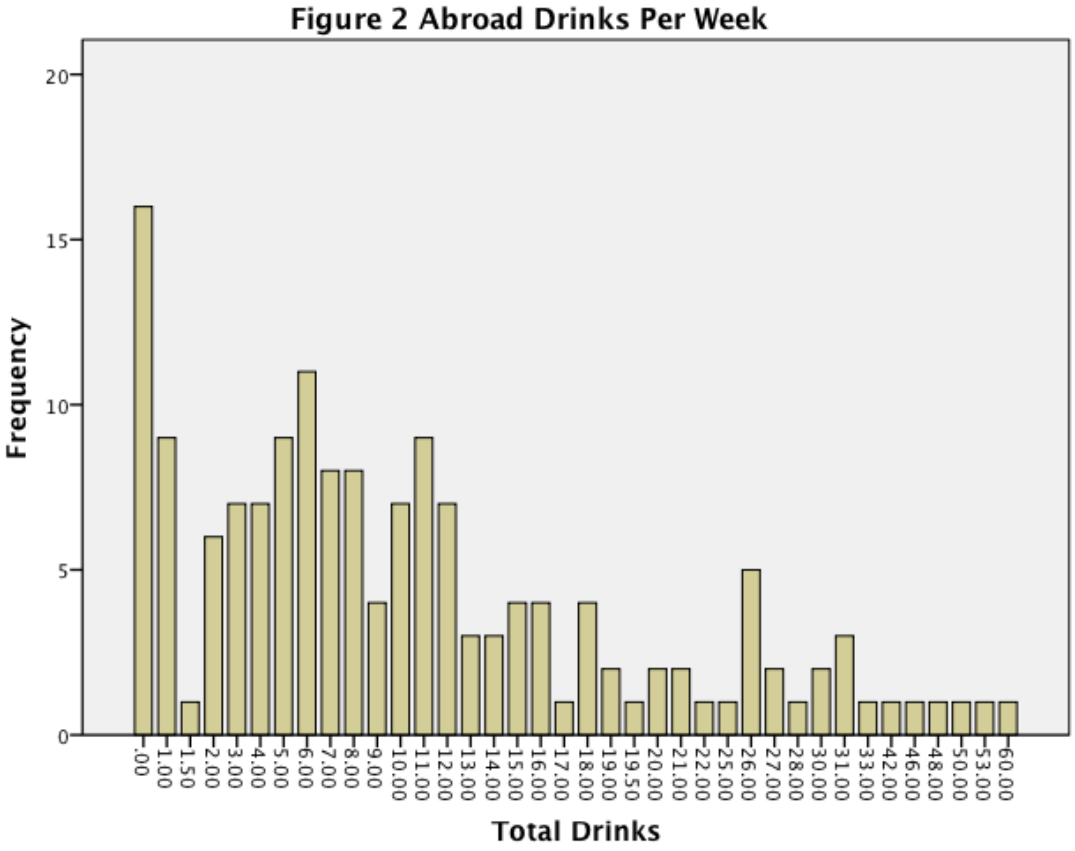

Table L.12. Abroad Daily Drinking Overall

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday	.3408	.0000	.00	.67946	.00	3.00
Monday	.7866	.0000	.00	2.03669	.00	12.00
Tuesday*	.5865	.0000	.00	1.34544	.00	7.00
Wednesday	1.1369	.0000	.00	2.405	.00	12.00
Thursday	2.0478	1.0	.00	2.57688	.00	12.00
Friday	3.2038	3.0000	.00	2.78040	.00	12.00
Saturday	3.1688	2.0000	.00	2.93605	.00	14.00

* Missing: 1

Table L.13. Abroad Daily Drinking By Gender

	n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday							
Males	43	.5000	.0000	.00	.86603	.00	3.00
Females	112	.2768	.0000	.00	.58832	.00	2.00
Transgender	1	1	1.00	1.00	-	1.00	1.00
Other	1	0	.0000	.00	-	.00	.00
Monday							
Males	43	.9884	.0000	.00	2.62426	.00	12.00
Females	112	.7232	.0000	.00	1.78689	.00	10.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	0	.0000	.00	-	.00	.00
Tuesday							
Males	43	.9186	.0000	.00	1.71801	.00	7.00
Females*	112	.4595	.0000	.00	1.16606	.00	7.00
Transgender	1	1	1.00	1.00	-	1.00	1.00
Other	1	0	.0000	.00	-	.00	.00
Wednesday							
Males	43	1.6163	.0000	.00	3.05473	.00	12.00
Females	112	.9732	.0000	.00	2.11157	.00	12.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	0	.0000	.00	-	.00	.00
Thursday							
Males	43	2.6860	1.00	.00	3.30228	.00	12.00
Females	112	1.8304	1.00	.00	2.22552	.00	11.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	1.00	1.00	1.00	-	1.00	1.00
Friday							
Males	43	4.2674	4.00	4.00	3.14406	.00	12.00
Females	112	2.8170	2.000	.00	2.53711	.00	10.00
Transgender	1	0	.0000	.00	-	.00	.00
Other	1	4.00	4.00	4.00	-	4.00	4.00
Saturday							
Males	43	4.2209	4.00	.004.00	3.27745	.00	12.00
Females	112	2.8036	2.00	.00	2.71744	.00	14.00
Transgender	1	0	0	.0000	-	.00	.00
Other	1	2.00	2.00	2.00	-	2.00	2.00

*Missing: 1

Table L.14. Abroad Daily Drinks By Age

	n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Sunday							
Under 21	112	.3170	.0000	.00	.66440	.00	3.00
21 and Over	45	.4000	.0000	.00	.71985	.00	3.00
Monday							
Under 21	112	.8884	.0000	.00	2.10502	.00	10.00
21 and Over	45	.53333	.0000	.00	1.85374	.00	12.00
Tuesday							
Under 21*	112	.5901	.0000	.00	1.35378	.00	7.00
21 and Over	45	.5778	.0000	.00	1.33976	.00	7.00
Wednesday							
Under 21	112	1.1830	.0000	.00	2.46507	.00	12.00
21 and Over	45	1.02222	.0000	.00	2.27125	.00	12.00
Thursday							
Under 21	112	2.1205	1.25	.00	2.48712	.00	11.00
21 and Over	45	1.8667	.0000	.00	2.80908	.00	12.00
Friday							
Under 21	112	3.2054	3.00	.00[a]	2.69597	.00	10.00
21 and Over	45	3.20	3.00	.00	3.01210	.00	12.00
Saturday							
Under 21	112	3.0848	2.00	1.00	2.75656	.00	10.00
21 and Over	45	3.37778	3.00	.00	3.36620	.00	14.00

* Missing: 1
[a.] Multiple modes exist. The smallest value is shown.

Table L.15. Abroad CCAPS-34 Descriptive Statistics (*N* = 157)

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
I am shy around others	1.4713	1.00	2	1.05345	0	4
My heart races for no good reason	.7707	0	0	.97318	0	4
I feel out of control when I eat	.8846	1.0	0	1.05318	0	4
I don't enjoy being around people as much as I used to	.9873	1.0	0	1.06209	0	4
I feel isolated and alone	.9936	1.00	0	1.14633	0	4
I think about food more than I would like to	1.3503	1.00	0	1.21880	0	4
I am anxious that I might have a panic attack while in public.	.5414	0	0	1.02838	0	4
I feel confident that I can succeed academically	3.0637	3.0	4	1.05418	0	4
I have sleep difficulties	2.8471	3.00	4	1.24120	0	4
My thoughts are racing	1.4713	1.0	0	1.29872	0	4
I feel worthless	.4968	0	0	.88161	0	4
I feel helpless	.5350	0	0	.87361	0	4
I eat too much	1.4013	1.0	0	1.31977	0	4
I drink alcohol frequently	1.4522	1.00	0	1.26818	0	4
I have spells of terror or panic	.6306	0	0	.98245	0	4
When I drink alcohol, I can't remember what happened.	.6369	0	0	1.01371	0	4
I feel tense	1.1210	1.00	0	1.12859	0	4
I have difficulty controlling my temper	.6369	0	0	.83323	0	3
I make friends easily	2.5796	3	3	1.03854	0	4
I sometimes feel like breaking or smashing thing	.7197	0	0	.95296	0	4
I feel sad all the time	.6688	0	0	.89435	0	4
I am concerned that other people do not like me	1.3822	1.00	1.00	1.15767	0	4
I get angry easily	.7707	1.00	0	.93967	0	4
I feel uncomfortable around people I do not know	1.5096	1.00	1	1.23318	0	4
I have thoughts of ending my life	.2166	0	0	.62346	0	4
I feel self conscious around others	1.4650	1.00	0	1.23791	0	4
I drink more than I should	.8205	0	0	1.07456	0	4
I am not able to concentrate as well as usual	1.0701	1.00	0	1.15534	0	4
I am afraid that I might lose control and act violently	.2166	0	0	.64369	0	4
It's hard to stay motivated for my classes	1.5287	1.00	1	1.26876	0	4
I have done something I regretted because of drinking*	1.0127	1.00	0	1.22468	0	4
I frequently get into arguments	.3822	0	0	.75562	0	4
I am unable to keep up with my homework	.5924	0	0	.96047	0	4
I have thoughts of hurting others	.1401	0	0	.47310	0	3

* Missing: 1

Table L.16. Abroad CCAPS-34 Scales (*N* = 157)

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Depression	.6497	.5000	0	.69265	0	3.50
Generalized Anxiety	1.2304	1.1667	.67	.61427	.17	3.50
Social Anxiety	1.6815	1.8000	2.00	.64687	.40	3.60
Academic Distress	1.5637	1.5000	1.25	.65774	0	3.75
Eating Concerns	1.2144	1.0000	0	1.06151	0	3.67
Hostility	.4777	.3333	0	.59109	0	3.33
Alcohol Use	.9793	.7500	0	.92895	0	4.00
Distress Index	.9513	.9500	.20	.57118	.15	3.35

Table L.17. Abroad CCAPS-34 Cut Scores (*N* = 157)

	Low		Mild		Elevated		*Change in Frequency of Elevated Scores**
	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Depression	120	76.4	22	14.0	15	9.6	↑2.6%
Generalized Anxiety	54	34.4	89	56.7	14	8.9	↑0.6%
Social Anxiety	78	49.7	61	38.9	18	11.5	↓3.1%
Academic Distress	71	45.2	67	42.7	19	12.1	↑1.9%
Eating Concerns	80	51.0	16	10.2	61	38.9	↑8.3%
Hostility	124	79.0	17	10.8	16	10.2	↑1.3%
Alcohol Use	71	45.2	27	17.2	59	37.6	↑1.3%
Distress Index	117	74.5	34	21.7	6	3.8	↓0.7%

Table L.18. Abroad CCAPS-34 Cut Scores By Gender

	Low		Mild		Elevated	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Males (*n* = 43)						
Depression	32	74.4	6	14.0	5	11.6
Generalized Anxiety	19	44.2	23	53.5	1	2.3
Social Anxiety	23	53.5	19	44.2	1	2.3
Academic Distress	18	41.9	20	46.5	5	11.6
Eating Concerns	30	69.8	3	7.0	10	23.3
Hostility	32	74.4	5	11.6	6	14.0
Alcohol Use	18	41.9	7	16.3	18	41.9
Distress Index	32	76.7	10	23.3	1	2.3
Females (*n* = 112)						
Depression	88	78.6	14	12.5	10	8.9
Generalized Anxiety	35	31.3	64	57.1	13	11.6
Social Anxiety	55	49.1	40	35.7	17	15.2
Academic Distress	53	47.1	46	41.1	13	11.6
Eating Concerns	48	42.9	13	11.6	51	45.5
Hostility	91	81.3	11	9.8	10	8.9
Alcohol Use	52	46.4	19	17.0	41	36.6
Distress Index	85	75.9	22	19.6	5	4.5
Transgender (*n* = 1)						
Depression	-	-	1	100	-	-
Generalized Anxiety	-	-	1	100	-	-
Social Anxiety	-	-	1	100	-	-
Academic Distress	-	-	-	-	1	100
Eating Concerns	1	100	-	-	-	-
Hostility	1	100	-	-	-	-
Alcohol Use	1	100	-	-	-	-
Distress Index	-	-	1	100	-	-
Other (*n* = 1)						
Depression	-	-	1	100	-	-
Generalized Anxiety	-	-	1	100	-	-
Social Anxiety	-	-	1	100	-	-
Academic Distress	-	-	1	100	-	-
Eating Concerns	1	100	-	-	-	-
Hostility	-	-	1	100	-	-
Alcohol Use	-	-	1	100	-	-
Distress Index	-	-	1	100	-	-

*Change from pre-departure to abroad

Table L.19. Abroad CCAPS-34 Items 25, 29, 34

	Frequency	Percent	Valid Percent	Cumulative Percent
I have thoughts of ending my life.				
Not at all like me (0)	135	86.0	86.0	86.0
(1)	14	8.9	8.9	94.9
(2)	5	3.2	3.2	98.1
(3)	2	1.3	1.3	99.4
Extremely like me (4)	1	0.6	0.6	100.0
I am afraid I may lose control and act violently.				
Not at all like me (0)	137	87.3	87.3	87.3
(1)	10	6.4	6.4	93.6
(2)	7	4.5	4.5	98.1
(3)	2	1.3	1.3	99.4
Extremely like me (4)	1	0.6	0.6	100.0
I have thoughts of hurting others.				
Not at all like me (0)	141	89.8	89.8	89.8
(1)	12	7.6	7.6	97.5
(2)	2	1.3	1.3	98.7
(3)	2	1.3	1.3	100.0
Extremely like me (4)	0	0.0	0.0	100.0
Total	157	100.0	100.0	--

Table L.20. Sojourner Adjustment Measure

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Missed my family and friends back home	5.53	6.00	6	1.479	1	7
Felt out of place in my host country	3.48	3.00	1	1.910	1	7
Felt sad or depressed about being far from home	3.22	3.00	1	2.018	1	7
Spent a good amount of time meeting and conversing with local people	4.59	5.0	5	1.629	1	7
Spent a good amount of time meeting and conversing with Americans	5.53	6.00	6[a]	1.328	1	7
Enhanced my understanding of my host country's culture	6.21	6.00	7	.863	3	7
Actively tried to learn more about local customs/traditions in my host country	6.24	6.00	7	.935	2	7
Gained insight into the culture of my host country*	6.28	6.00	7	.856	3	7
Felt anxious or nervous about being far from home	3.25	3	1	1.980	1	7
Developed my own perspective of my host country	5.89	6.00	7	1.066	1	7
Socialized a good deal with local people from my host country	4.68	5.00	5	1.626	1	7
Socialized a good deal with Americans	5.53	6.00	6	1.352	1	7
Subscribed to the values of my host country	5.11	5.00	5	1.338	1	7
Increased my understanding of my host country's language (or local dialect)	6.03	6.00	7	1.003	2	7
Behaved in ways that are typical of members of my host country	5.39	6.00	6	1.290	1	7
Actively tried to make American acquaintances	4.69	5.00	4	1.585	1	7
Felt like once I returned home I would maintain some of the cultural-specific practices I learned by living abroad	5.24	5.00	5	1.392	1	7
Had deep and meaningful conversations with local people	4.68	5.00	5	1.794	1	7
Had meaningful social interactions with local people*	4.94	5.00	5	1.639	1	7
Had meaningful social interactions with Americans	5.52	6.00	6[a]	1.376	1	7
Used my host country's language to communicate with local people	5.85	6.00	7	1.339	1	7
Learned about the local language by communicating with local people in my host country's language	5.74	6.00	7	1.282	1	7
Had long conversations with local people using the host country's language or local dialect/idiom	4.54	5.00	7	2.055	1	7
Subscribed to the religious and/or political beliefs of my host country	3.03	3.00	1[a]	1.783	1	7

*Missing: 1; [a.] Multiple modes exist. The smallest value is shown

Table L.21. Sojourner Adjustment Measure Scales Overall (*N* = 157)

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Social Interaction with Host Nationals	4.7235	5.00	5.25[a]	1.42962	1	7
Cultural Understanding and Participation	6.1529	6.25	7.00	.77967	3.25	7
Language Development and Use	5.5414	5.75	7.00	1.12120	2.50	7
Host Culture Identification	4.6911	4.75	4.00[a]	1.08240	1.50	7
Social Interaction with Co-Nationals	5.3153	5.50	6.00	1.14219	2	7
Homesickness/ Feeling Out of Place	3.8726	3.50	3.50	1.47158	1	6.75

Table L.22. Sojourner Adjustment Measure Scales By Gender

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Males (*n* = 43)						
Social Interaction with Host Nationals	4.4651	4.50	4.75	1.3970	2	7
Cultural Understanding and Participation	6.0698	6.25	7.00	.7943	3.50	7
Language Development and Use	5.3023	5.25	4.50[a]	1.13331	2.50	7
Host Culture Identification	4.6163	4.50	4.00[a]	1.01235	2.50	7
Social Interaction with Co-Nationals	5.2326	5.25	5.25 [a]	1.0559	2.50	7
Homesickness/ Feeling Out of Place	3.7384	3.50	4.50	1.4850	1	6.50
Females (*n* = 112)						
Social Interaction with Host Nationals	4.8021	5.00	5.00[a]	1.43325	1	7
Cultural Understanding and Participation	6.1853	6.25	7.00	.77310	3.25	7
Language Development and Use	5.6161	5.75	7.00	1.11194	3.0	7
Host Culture Identification	4.7143	4.75	4.00[a]	1.09506	1.50	7
Social Interaction with Co-Nationals	5.3751	5.50	6.00	1.18394	2	7
Homesickness/ Feeling Out of Place	3.9129	3.50	2.75[a]	1.46225	1	6.75
Transgender (*n* = 1)						
Social Interaction with Host Nationals	7	7	7	-	7	7
Cultural Understanding and Participation	7	7	7	-	7	7
Language Development and Use	6.50	6.50	6.50	-	6.50	6.50
Host Culture Identification	6.75	6.75	6.75	-	6.75	6.75
Social Interaction with Co-Nationals	4.75	4.75	4.75	-	4.75	4.75
Homesickness/ Feeling Out of Place	2.75	2.75	2.75	-	2.75	2.75
Other (*n* = 1)						
Social Interaction with Host Nationals	4.75	4.75	4.75	-	4.75	4.75
Cultural Understanding and Participation	5.25	5.25	5.25	-	5.25	5.25
Language Development and Use	6.50	6.50	6.50	-	6.50	6.50
Host Culture Identification	3.25	3.25	3.25	-	3.25	3.25
Social Interaction with Co-Nationals	4.75	4.75	4.75	-	4.75	4.75
Homesickness/ Feeling Out of Place	6.25	6.25	6.25	-	6.25	6.25

[a.] Multiple modes exist. The smallest value is shown

Table L.23. Scores for Social Interactions with Co-Nationals

	Frequency	Percent	Valid Percent	Cumulative Percent
2.00	1	.6	.6	.6
2.50	3	1.9	1.9	2.5
2.75	1	.6	.6	3.2
3.00	5	3.2	3.2	6.4
3.25	2	1.3	1.3	7.6
3.50	3	1.9	1.9	9.6
3.75	4	2.5	2.5	12.1
4.00	4	2.5	2.5	14.6
4.25	6	3.8	3.8	18.5
4.50	6	3.8	3.8	22.3
4.75	15	9.6	9.6	31.8
5.00	14	8.9	8.9	40.8
5.25	11	7.0	7.0	47.8
5.50	13	8.3	8.3	56.1
5.75	11	7.0	7.0	63.1
6.00	18	11.5	11.5	74.5
6.25	11	7.0	7.0	81.5
6.50	11	7.0	7.0	88.5
6.75	5	3.2	3.2	91.7
7.00	13	8.3	8.3	100.0
Total	157	100.0	100.0	--

Table L.24. Scores for Homesickness/ Feeling Out of Place

	Frequency	Percent	Valid Percent	Cumulative Percent
1.00	2	1.3	1.3	1.3
1.25	2	1.3	1.3	2.5
1.50	4	2.5	2.5	5.1
1.75	5	3.2	3.2	8.3
2.00	5	3.2	3.2	11.5
2.25	7	4.5	4.5	15.9
2.50	9	5.7	5.7	21.7
2.75	12	7.6	7.6	29.3
3.00	11	7.0	7.0	36.3
3.25	9	5.7	5.7	42.0
3.50	14	8.9	8.9	51.0
3.75	7	4.5	4.5	55.4
4.00	1	.6	.6	56.1
4.25	8	5.1	5.1	61.1
4.50	9	5.7	5.7	66.9
4.75	4	2.5	2.5	69.4
5.00	10	6.4	6.4	75.8
5.25	10	6.4	6.4	82.2
5.50	6	3.8	3.8	86.0
5.75	7	4.5	4.5	90.4
6.00	2	1.3	1.3	91.7
6.25	3	1.9	1.9	93.6
6.50	6	3.8	3.8	97.5
6.75	4	2.5	2.5	100.0
Total	157	100.0	100.0	--

Table L.25. Scores for Homesickness/ Feeling Out of Place

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
I drink to forget my worries	1.37	1.00	1	.643	1	4
I drink because my friends pressure me to drink	1.34	1.00	1	.677	1	4
I drink because it helps me enjoy a party	2.56	2.00	2	1.232	1	5
I drink because it helps me when I feel depressed or nervous	1.32	1.0	1	.643	1	4
I drink to be sociable	3.12	3.00	4	1.327	1	5
I drink to cheer me up when I'm in a bad mood	1.59	1.00	1	.847	1	5
I drink because I like the feeling*	2.78	3.00	4	1.350	1	5
I drink so that others won't tease me about not drinking	1.21	1.00	1	.680	1	5
I drink because it's exciting	2.43	2.00	1	1.360	1	5
I drink to get high.	1.60	1.00	1	1.012	1	5
I drink because it makes social gatherings more fun*	2.94	3.00	2	1.340	1	5
I drink to fit in*	1.49	1.00	1	.884	1	5
I drink because it gives me a pleasant feeling*	2.85	3.00	1[a]	1.409	1	5
I drink because it improves parties and celebrations**	2.82	3.00	4	1.355	1	5
I drink because it helps me feel self-confident and sure of myself*	2.21	2.00	1	1.253	1	5
I drink to celebrate a special occasion with friends.	3.39	4.00	4	1.252	1	5
I drink to forget about my problems*	1.35	1.00	1	.734	1	5
I drink because it's fun*	3.35	4.00	4	1.381	1	5
I drink to be liked*	1.29	1.00	1	.711	1	5
I drink so I won't feel left out*	1.35	1.00	1	.743	1	5

* Missing: 1 ** Missing: 2 a. Multiple Modes exist. The smallest value is shown.

Table L.26. Drinking Motives Questionnaire-Revised Scales Overall and By Gender

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Overall (*N* = 157)						
Coping Motives	1.586	1.40	1.00	.62823	1.00	4.60
Social Motives	2.9707	3.00	2.60	1.08912	1.00	5.00
Conformity Motives	1.3376	1.00	1.00	.56015	1.00	3.80
Enhancement Motives	2.5996	2.60	1.00	1.09639	1.00	5.00
Males (*n* = 43)						
Coping Motives	1.6062	1.60	1.00	.60716	1	3.80
Social Motives	3.0535	3.40	4.00	1.13523	1	4.80
Conformity Motives	1.2698	1.20	1.00	.49161	1.00	3.20
Enhancement Motives	2.5008	2.60	1.00	1.04313	1.00	4.20
Females (*n* = 112)						
Coping Motives	1.5518	1.40	1.0	.63996	1.00	4.60
Social Motives	2.9527	3.00	2.60	1.07970	1.00	5.00
Conformity Motives	1.3661	1.00	1.00	.58872	1.00	3.80
Enhancement Motives	2.6393	2.60	1.00	1.2140	1.00	5.00
Transgender (*n* = 1)						
Coping Motives	1.20	1.20	1.20	-	1.20	1.20
Social Motives	2.20	2.20	2.20	-	2.20	2.20
Conformity Motives	1.20	1.20	1.20	-	1.20	1.20
Enhancement Motives	1.60	1.60	1.60	-	1.60	1.60
Other (*n* = 1)						
Coping Motives	2.20	2.20	2.20	-	2.20	2.20
Social Motives	2.20	2.20	2.20	-	2.20	2.20
Conformity Motives	1.20	1.20	1.20	-	1.20	1.20
Enhancement Motives	3.40	3.40	3.40	-	3.40	3.40

Table L.27. Frequencies for Rutgers Alcohol Problem Index-Modified

	Males		Females		Transgender		Other		Overall	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
1.Had a hangover the day after drinking	16	27	45	67	1	0	1	0	63	94
2.Threw up during or after drinking	30	13	89	29	1	0	0	1	114	43
3.Found myself in a situation where I did not remember all or parts of a night	25	18	76	36	1	0	1	0	103	54
4.Embarrassed myself by saying or doing something I regretted	27	16	82	30	1	0	1	0	111	46
5. Spent more money than I had planned on alcohol	17	26	53	59	1	0	0	1	71	86
6. Ended up drinking on days that I had not planned on	16	27	46	66	0	1	1	0	63	94
7. Passed out from drinking (that is, fell asleep before I wanted to)	36	7	98	14	1	0	1	0	136	21
8. Missed class	39	4	98	13	1	0	1	0	139	17
9.Felt guilty or bad about myself	33	10	83	29	-	-	1	0	117	39
10. Noticed that I needed more alcohol in order to feel the same effect	33	10	89	23	1	0	1	0	124	33
11.Found that I spent more time than I wanted drinking or partying	33	10	90	21	1	0	1	0	125	31
12.Became emotionally homesick after I had been drinking	41	2	95	17	1	0	0	1	137	20
13. Found myself in a dangerous situation that I would not have been in sober	37	6	102	10	1	0	1	0	141	16
14.Had difficulty making my way back home at the end of the night	30	13	86	26	1	0	1	0	118	39
15. Injured myself (e.g., fell, badly cut self, broke a bone)	37	5	102	10	1	0	1	0	141	15
16.Got into an argument with another member of my study-abroad group	37	5	106	6	1	0	1	0	145	11
17.Noticed that I was not acting/behaving like myself	35	8	96	15	1	0	1	0	133	23
18.Had someone from home or abroad tell me that I had not been acting like myself	38	4	111	1	1	0	1	0	151	5
19. Had sex with someone I would not have had sex with sober	41	2	108	4	1	0	1	0	151	6
20.Broke a local law while drinking but did not get caught	34	9	105	6	1	0	1	0	141	15
21.Tried to limit my drinking but found it difficult	40	3	101	11	1	0	1	0	143	14
22.Lost an important item (such as cell phone, keys, wallet, passport)	37	6	102	10	1	0	1	0	141	16
23. Had unprotected sex	40	3	108	4	1	0	1	0	150	7
24. Had a friend bail me out of a bad situation I would not have been in if sober	43	0	111	1	1	0	1	0	156	1
25. Neglected or avoided friends/family back home	40	3	106	6	1	0	1	0	148	9
26. Got into a fight, heated argument, or bad situation with a local	39	4	108	4	1	0	1	0	149	8
27. Got into a fight with a close friend from back home	41	1	109	3	1	0	1	0	152	4
28. Felt like my school work or class attendance was suffering from partying too much	40	3	103	9	1	0	1	0	145	12
29. Cheated (i.e, hooking up, sex) on a boyfriend/girlfriend who was back home	42	1	110	2	1	0	1	0	154	3
30. Missed flights, trains, or disrupted my travel plans	42	1	109	3	1	0	1	0	153	4
31. Felt like my cultural experience was suffering as a result of partying too much	41	2	106	6	1	0	-	-	148	8
32. Was confronted about my drinking by the study-abroad staff or fellow student	43	0	112	0	1	0	1	0	157	0
33. Missed class or program field trips	39	4	102	10	1	0	1	0	143	14
34. Got mugged, robbed, or assaulted	41	2	109	3	1	0	1	0	152	5
35. Got in trouble with study-abroad staff at host country or with school back home	40	3	109	3	1	0	1	0	151	6
36. Got in trouble with local police or authorities	43	0	111	1	1	0	1	0	156	1
37. Friends/family back home avoided me	43	0	112	0	1	0	1	0	157	0
38. Did something to offend or upset my host family	43	0	111	1	1	0	1	0	156	1
39. Felt isolated from the group because of my behavior related to drinking	43	0	110	2	1	0	1	0	155	2

Table L.28. Total Number of Drinking Related Consequences

	Frequency	Percent	Valid Percent	Cumulative Percent
.00	25	15.9	15.9	15.9
1.00	18	11.5	11.5	27.4
2.00	13	8.3	8.3	35.7
3.00	18	11.5	11.5	47.1
4.00	13	8.3	8.3	55.4
5.00	13	8.3	8.3	63.7
6.00	8	5.1	5.1	68.8
7.00	9	5.7	5.7	74.5
8.00	8	5.1	5.1	79.6
9.00	5	3.2	3.2	82.8
10.00	3	1.9	1.9	84.7
11.00	3	1.9	1.9	86.6
12.00	2	1.3	1.3	87.9
13.00	4	2.5	2.5	90.4
14.00	6	3.8	3.8	94.3
15.00	2	1.3	1.3	95.5
17.00	1	.6	.6	96.2
18.00	1	.6	.6	96.8
19.00	3	1.9	1.9	98.7
21.00	1	.6	.6	99.4
22.00	1	.6	.6	100.0
Total	157	100.0	100.0	--

Table L.29. RAPI Descriptive Statistics (Overall, By Gender, and By Age)

	N/n	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Overall	157	5.2420	4	0	5.04518	0	22
RAPI By Gender							
Males	43	6	5	0	5.62308	0	21
Females	112	5.0089	4	0	4.82952	0	22
Transgender	1	1	1	1	-	1	1
Other	1	3	3	3	-	3	3
RAPI By Age							
Under 21	112	5.2054	4	0	4.97406	0	22
Over 21	45	5.3333	4	0	5.27429	0	19

Table L.30. Correlations Matrix for Predictor Variables

		Weekly Drinks	Distress Index	SAM InterHost	SAM CultUnder	SAM Language	SAM HostCulture	SAM InterCo	SAM Homesick	Coping Motives	Social Motives	Conform Motives	Enhance Motives
Weekly drinks	Pearson Correlation	1	-.028	.000	.092	.138	.143	.296**	-.098	.324**	.436**	.103	.439**
	Sig. (2-tailed)		.726	.998	.254	.085	.073	.000	.220	.000	.000	.201	.000
Distress Index	Pearson Correlation	-.028	1	-.328**	-.135	-.095	-.295**	-.272**	.416**	.240**	.063	.252**	.043
	Sig. (2-tailed)	.726		.000	.091	.236	.000	.001	.000	.002	.431	.001	.591
SAMInterHost	Pearson Correlation	.000	-.328**	1	.449**	.517**	.578**	.237**	-.386**	-.094	-.016	-.149	.061
	Sig. (2-tailed)	.998	.000		.000	.000	.000	.003	.000	.241	.840	.062	.444
SAMCultUnder	Pearson Correlation	.092	-.135	.449**	1	.436**	.416**	.382**	-.145	.000	.190*	-.084	.194*
	Sig. (2-tailed)	.254	.091	.000		.000	.000	.000	.070	.999	.017	.293	.015
SAMLanguage	Pearson Correlation	.138	-.095	.517**	.436**	1	.479**	.308**	-.040	.179*	.174*	.011	.274**
	Sig. (2-tailed)	.085	.236	.000	.000		.000	.000	.619	.025	.029	.893	.001
SAMHostCulture	Pearson Correlation	.143	-.295**	.578**	.416**	.479**	1	.338**	-.304**	-.005	.028	-.128	.142
.	Sig. (2-tailed)	.073	.000	.000	.000	.000		.000	.000	.949	.731	.110	.075
SAMInterCo	Pearson Correlation	.296**	-.272**	.237**	.382**	.308**	.338**	1	.004	.150	.321**	.093	.343**
	Sig. (2-tailed)	.000	.001	.003	.000	.000	.000		.958	.061	.000	.246	.000
SAMHomesick	Pearson Correlation	-.098	.416**	-.386**	-.145	-.040	-.304**	.004	1	.284**	.050	.199*	.046
	Sig. (2-tailed)	.220	.000	.000	.070	.619	.000	.958		.000	.533	.013	.567
Coping Motives	Pearson Correlation	.324**	.240**	-.094	.000	.179*	-.005	.150	.284**	1	.560**	.439**	.574**
	Sig. (2-tailed)	.000	.002	.241	.999	.025	.949	.061	.000		.000	.000	.000
Social Motives	Pearson Correlation	.436**	.063	-.016	.190*	.174*	.028	.321**	.050	.560**	1	.345**	.745**
	Sig. (2-tailed)	.000	.431	.840	.017	.029	.731	.000	.533	.000		.000	.000
Conform Motives	Pearson Correlation	.103	.252**	-.149	-.084	.011	-.128	.093	.199*	.439**	.345**	1	.165*
	Sig. (2-tailed)	.201	.001	.062	.293	.893	.110	.246	.013	.000	.000		.039
Enhance Motives	Pearson Correlation	.439**	.043	.061	.194*	.274**	.142	.343**	.046	.574**	.745**	.165*	1
	Sig. (2-tailed)	.000	.591	.444	.015	.001	.075	.000	.567	.000	.000	.039	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise *N* = 157

Curriculum Vitae

Laura K. Thompson

Education

PhD Candidate, Counseling and Counselor Education, January 2011-present
Syracuse University (expected completion, December 2015) (CACREP accredited program)

Certificate of Advanced Studies (CAS) in Addiction Studies
Syracuse University

Master of Arts in Counseling and Educational Psychology, May 1998
University of Nevada, Reno
Emphasis: College Student Development (60-unit, CACREP accredited program)

Bachelor of Arts, Cum Laude, May 1990
University of San Diego
Major: Communication Studies Minor: Business Administration

University Studies Abroad Consortium, San Sebastian, Spain Summer Program, 2001
University of San Diego, Guadalajara, Mexico Summer Program, 1988

Licensure/Certification

State of Colorado Licensed Professional Counselor Number: 0012594
National Certified Counselor
State of New York CASAC Trainee Certificate Number: 30906

Counseling Experience

Staff Counselor, Substance Abuse Specialty, Office of Counseling & Personal Development
Regis University, Denver, Colorado, August 2015-present

- Conduct individual and couples counseling with undergraduate and graduate students
- Provide crisis intervention services
- Provide outreach to groups and departments on campus on a range of topics related to mental health and substance abuse prevention
- Facilitate psychoeducational and process groups
- Coordinate services and programming related to substance abuse prevention
- Serve as primary supervisor for interns on all mandated substance abuse cases

Counselor (Graduate Assistant), Counseling Center
Syracuse University, Syracuse, New York, August 2012-May 2015

- Provided counseling to undergraduate/graduate students related to a wide range of issues including alcohol and drug use, anxiety, depression, relationships, identity, body image, and sexual assault
- Performed intake assessments, maintained client files, and coordinated case management
- Developed, scheduled, and conducted education and outreach programming in the areas of substance abuse prevention/harm reduction and other areas of health and wellness
- Provided walk-in crisis services for urgent student mental health needs
- Conducted weekly psycho-educational group on the effects of alcohol and marijuana
- Co-facilitated "Peaceful Minds," a skills-based group for anxiety and stress-reduction
- Co-facilitated an undergraduate process group
- Participated in weekly individual and group clinical supervision

Intern, Brownell Center for Behavioral Health Services
Syracuse, New York, August 2011-May 2012

- Provided individual counseling sessions in community mental health setting
- Co-facilitated process group for individuals with co-occurring disorder
- Participated in weekly individual and group clinical supervision

Intern, Counseling Center
University of Nevada, Reno, Nevada, January 1998-May 1998
- Provided personal counseling services for undergraduate individuals and couples

Intern, Department of Counseling and Educational Psychology, Jerry Downing Counseling Clinic
University of Nevada, Reno, Nevada, September 1997-December 1997
- Provided personal counseling services for individuals from the Reno community

Teaching/Presentation Experience

Instructor, Counseling and Human Services
Syracuse University, Syracuse, New York, Summer Session 1, 2013; Summer Session 1, 2015
- Instructed Substance Abuse Counseling (COU 675) for graduate students
- Provided an overview of the biological, psychological, and social factors contributing to substance abuse
- Reviewed the main etiological theories of substance abuse, common drugs of abuse and their effects, the stages of change, the assessment and diagnosis process, dual-diagnosis, evidence-based treatments, treatment planning, and relapse prevention strategies
- Created course syllabus, lesson plans and assignments designed to engage students and support their development of knowledge and an introductory-level of competence of substance abuse counseling
- Evaluated student progress

Co-Instructor, (with Dr. Jason Duffy), Counseling and Human Services
Syracuse University, Syracuse, New York, Spring 2015
- Co-instructed Pre-practicum II (COU 645)
- Facilitated class discussions on topics related to clinical skill development with particular attention given to the role of race, ethnicity, class, gender, sexual orientation, ability, and power dynamics
- Observed student counseling sessions and provided feedback
- Assisted in the creation and grading of course assignments

Co-Instructor, (with Dr. Jason Duffy), Counseling and Human Services
Syracuse University, Syracuse, New York, Fall 2014
- Co-instructed Theories of Counseling (COU 624)
- Prepared and provided lectures on theoretical models of counseling
- Assisted in the creation and grading of course assignments

Teaching Mentor, Teaching Assistant Orientation Program
Syracuse University, Syracuse, New York, August 2014
- Selected to serve as a member of the core instructional staff for International Teaching Assistant Orientation and Teaching Assistant Orientation
- Planned and presented sessions and served as a small group leader and mentor to new Teaching Assistants
- Co-led a session on creating a teaching portfolio (January 2015)

Instructor (with Dr. Christopher Pisarik), Division of Academic Enhancement, Freshman College
University of Georgia, Athens, Georgia, July 2012-August 2012
- Co-instructed two sections of course (UNIV 1102) designed to assist incoming freshmen with their adjustment to college
- Designed course syllabus and lesson plans on topics including motivation, identity stress, management, financial management, study skills, career development, and time management
- Evaluated student progress

Graduate Assistant/Teaching Assistant, Counseling and Human Services
Syracuse University, Syracuse, New York, January 2011-May 2012
- Coordinated new student orientation for department (Fall 2011)
- Co-coordinated clinical placements for master's-level Clinical Mental Health students (2011-2012)
- Provided supervision to master's-level students in training
- Participated in the selection process for master's students
- Assisted professors with research and completed other tasks as assigned (2011-2012)

***Teaching Assistant** (for Dr. Cory Wallack), **Counseling 651, Crisis Counseling,** Summer 2014*
***Teaching Assistant** (for Dr. Tamara Clingerman), **Counseling 644, Pre-practicum,** Spring 2013*
***Teaching Assistant** (for Dr. Tamara Clingerman), **Counseling 644, Pre-practicum,** Spring 2012*

Teaching Assistant, Counseling 101, Developmental Issues of College Age Students, *Fall 2011*

Teaching Fellow (*for Dr. Jerry Mager and Dr. Joanna Masingila),* ***EDU 760: Pedagogical Strategies in Teaching Undergraduates,*** *January 5-9, 2015*

Guest Lecturer *for Dr. Melissa Luke's Advanced Counseling Theories class, October 2014*
Guest Lecturer *for Dr. Janine Bernard's Pre-practicum class, September 2014*
Guest Lecturer *for Dr. Melissa Luke's EDU 101 class, Fall 2011*

Instructor *(with Dr. Brack Hale)****, Academic Travel Program, Franklin University Switzerland***
Sorengo, Switzerland, Fall 2006
- Co-Taught/Organized a 2-week, Academic Travel Course for 24 students to Germany and Austria

Instructor, Department of Counseling and Educational Psychology
University of Nevada, Reno, Nevada, Fall Semester 1999
- Co-instructed Freshman Year Experience/career development class for undeclared students

Instructor, Department of Counseling and Educational Psychology
University of Nevada, Reno, Nevada, Fall Semester 1994 and Fall Semester 1998
- Co-instructed course for Resident Assistants

Presenter *(with Dr. Christopher Pisarik).* ***Association for Counselor Education and Supervision Conference,*** *Philadelphia, Pennsylvania, October 9, 2015*
- *"Why Counselor Education?: Factors That Influence Students' Choice to Pursue Doctoral Programs in Our Profession."*

Presenter *(with Dr. Jason Duffy).* ***Association for Counselor Education and Supervision Conference,*** *Philadelphia, Pennsylvania, October 8, 2015*
- *"The Power of Metaphor: Creatively Using Metaphoric Stories to Facilitate Counselor Development*."

Presenter, College Centers of New York Conference
Syracuse, New York, June 4, 2015
- *"How Mental Health, Drinking Motives, and Sojourner Adjustment Impact Alcohol-Related Consequences for College Students Studying Abroad"*

Presenter *(with Dr. Melissa Luke),* ***North Atlantic Region Association for Counselor Education and Supervision Conference,*** *Providence, Rhode Island, September 26, 2014*
- *"Applying Self-Determination Theory to the Clinical Supervisory Context: New Knowledge to Inform Our Supervision Practices"*

Presenter *(with S. Spiegelhoff & A. Hrovat),* ***New York State College Health Association Conference,*** *Syracuse, New York, October 26, 2012*
- *"Creating Communities of Wellness through Expressive Therapies"*

Presenter *(with A. Hrovat & S. Thaxton),* ***North Atlantic Region Association for Counselor Education and Supervision Conference,*** *Niagara Falls, New York, September 30, 2012*
- *"Giving Students the Edge: Preparing Counselors-in-training for a Multidisciplinary Workplace"*

Presenter *(with S. Spiegelhoff & A. Hrovat),* ***North Atlantic Region Association for Counselor Education and Supervision Conference,*** *Niagara Falls, New York, September 29, 2012*
- *Poster Session: "Creating Communities of Wellness through Expressive Therapies"*

Presenter *(with P. Dupey),* ***American Counseling Association World Conference***
Washington D.C., March 2000
- *"Counselors as Administrators: Tools for Increasing Your Effectiveness as a Leader"*

Presenter *(with S. Niedergall)****, National Association of Academic Advisors for Athletics***
Region V Conference, San Diego, California, November 1997
- *"Are Student-Athletes Getting the Academic Message? Examining Issues Beyond Eligibility"*

Student Life Experience

Assistant Dean of Student Life, Franklin University Switzerland
Sorengo, Switzerland, June 2005-September 2010

- Co-managed the Office of Student Life
- Participated in on-call duty rotation, providing 24-hour crisis response
- Supervised the College Counselor and Nurse
- Met with students to discuss a variety of issues and concerns and provided direction and support
- Provided career counseling services for students including the administration and interpretation of the Myers-Briggs Type Indicator® Assessment and the organization of Career Events for students
- Oversaw the housing application/selection process, assigned rooms, and maintained housing rosters
- Produced *Frankly Speaking*, a weekly on-line newsletter for the Franklin Community
- Managed the Student Development and Student Employment Programs
- Assisted in writing the Franklin University Code of Conduct
- Co-chaired, Franklin University Switzerland Judicial Hearing Board
- Co-Coordinated Franklin's Safe Program, an educational program focused on issues of gender equality and sexuality
- Initiated and implemented 100% smoke-free housing at Franklin University

Director of Student Life, University of Redlands' Salzburg Program
Salzburg, Austria, August 2003-May 2005

- Served as a resource for American students who participated in a semester-long study-abroad program in Salzburg
- Assisted students with adjustment/counseling issues
- Served as a liaison between students and the University of Redlands in Redlands, California

Resident Director, Semester at Sea Program
Institute for Shipboard Education, January 2002-May 2002 & June 2000-August 2000

- Provided general residence life services to a community of 617 students on a 100-day voyage with travels to Cuba, Brazil, South Africa, Mauritius, India, Singapore, Vietnam, China, and Japan
- Counseled students about personal and academic issues
- Worked closely with an international crew to enforce safety and security policies and procedures
- Coordinated a re-entry support group for Semester at Sea staff members

June 2000-August 2000:

- Provided general residence life services to a community of 420 students on a 65-day voyage which traveled to Greece, Spain, Norway, Russia, Belgium, Portugal, Italy, Egypt, and Israel

Area Director, Housing and Residence Life
Tulane University, New Orleans, Louisiana, December 2000-June 2001 (Interim Position)

- Supervised and motivated a staff of 18 Resident Advisors, 2 Assistant Resident Directors, 15 Desk Service Coordinators, and 1 Administrative Assistant
- Oversaw/operated a four-building housing complex and an apartment complex that housed approximately 850 students and include 3 Living-Learning Communities (the Global Village, the Urban Village, and the Leadership Village)
- Facilitated judicial affairs related to policy violations, including notification of violation, hearing meeting, educational sanctioning, and follow-up

Resident Director/ Panhellenic Advisor, Residential Life, Housing and Food Service & Greek Life
University of Nevada, Reno, Nevada, August 1998-June 2000

- Recruited, trained, supervised, and evaluated 9 Resident Assistants; Supervised 1 full-time Administrative Aid and 1 full-time Facility Attendant
- Oversaw the daily operations of 3 residence halls with approximately 240 residents
- Participated in on-call duty rotation, providing 24-hour crisis response
- Provided counseling, advising, conflict resolution, and crisis management services to residents
- Provided guidance, counsel and support to the Panhellenic Association
- Oversaw Rush process and coordinated new member education programs for sororities and fraternities on topics including sexual assault prevention, alcohol awareness, diversity, safety/hazing
- Assisted in the development of a system-wide anti-hazing policy

Advising/Mentoring Experience

Instructional Assistant, Stevenson Center
Syracuse University, July-August, 2014
- Provided academic support and tutoring services to student-athletes

Athletic Advisor (Graduate Assistant), Mackay Athletic Resource Center
University of Nevada, Reno, Nevada, August 1994-July 1998
- Advised an ethnically diverse student-athlete population on academic and personal matters
- Coordinated academic and career workshops for student-athletes

Publications

Thompson, L.K. (In press). Embracing the dark. In M.K. Shuler, E. Keller-Dupree, & K. Cook (Eds.) *Transformational Learning Experiences: A Conversation with Counselors about their Personal and Professional Developmental Journeys*. Lanham, Maryland: University Press of America.

Luke, M., & Thompson, L. K. (In review). Examining self-determination theory in the clinical supervisory context. *The Clinical Supervisor.*

Hrovat, A.M., Thompson, L.K., & Thaxton, S.L. (2013). Preparing counselors-in-training for multidisciplinary collaboration: Lessons learned from a pilot program. *American Counseling Association VISTAS.*

Thompson, W.N., & Thompson, L.K. (2013). Casino and drug policy in the Netherlands – 'down the wrong road again.' *European Gaming Law, pp. 6-7.*

Thompson, L.K. (2009). Kebba. In S.M. Marshall (Ed.), *More stories of inspiration: 51 uplifting tales of courage, humor, healing, and learning in student affairs (pp. 53-56).* Washington, DC: National Association of Student Personnel Administrators.

Thompson, L.K. (2009). Seattle 2009: Perspectives from an American Living Abroad. *The NASPA Forum.*

Professional Development Activities/Achievements

- Recipient, Outstanding Teaching Assistant Award, 2014
  Awarded by The Graduate School, Syracuse University
- Chair, Professional Development, Syracuse University's Sigma Upsilon Chapter of Chi Sigma Iota, 2012-2013
  Secured funding and organized details for Ethan Watters, author of *Crazy Like Us, the Globalization Of the American Psyche*, to visit Syracuse University and speak to the campus community
- Meditation Facilitator, Syracuse University Student Buddhist Association, Fall 2011-May 2014
- Committee Member, Eating Disorders Task Force, University of Nevada, Reno, Fall 1998-June 2000
- Board Member, *Join Together Northern Nevada…a community partnership to reduce the harms of substance abuse,* Spring 1998-Spring 2000

Professional Organizations

- American Counseling Association
- Association for Counselor Education and Supervision
- Member, International Association of Addictions and Offender Counselors
- North Atlantic Region Association for Counselor Education and Supervision
- NASPA, Student Affairs Administrators in Higher Education
- Chi Sigma Iota